Appendix A: Steering Committee and Stakeholder Group Meetings

Table of Contents

Public Participation Plan (PPP) **1**
Meeting Materials **9**
Steering Committee Meetings 9
Stakeholder Group Meetings 212
Additional Meetings **308**
Throughfare Plan Update Meetings 308

Pearland Mobility Study
Public Participation Plan

CITY OF PEARLAND, TEXAS

LAST EDITED: JUNE 17, 2025

Prepared for: Houston-Galveston Area Council

Prepared by:

Kimley»Horn

kimley-horn.com | 11700 Katy Freeway, Suite 800, Houston, TX 77079 | 281-597-9300

Pearland Mobility Study
PUBLIC PARTICIPATION PLAN

INTRODUCTION

The Pearland Mobility Study is a holistic analysis of the City's transportation network. The Study will investigate safety, connectivity, network efficiency, and integration of multimodal facilities. It will incorporate public engagement to better understand where existing congestion and safety issues are and where improvements should be prioritized. It will determine existing and future needs based on existing conditions analysis, the recent update to the Future Land Use Plan and potential buildout scenarios. The Study will result in a Mobility Plan that includes an action plan, traffic management plan and updates to the Pearland Thoroughfare Plan. The Mobility Plan will include ongoing public participation during the plan's year-long process. Specifically, the Public Participation Plan will utilize existing communication methods and identify key strategies to inform and engage the community's constituents.

Purpose, Goals, and Objectives

The purpose of the Public Participation Plan is to serve as an outline for engagement, outreach methods, and critical events that will ensure meaningful participation. The project will solicit feedback from a wide variety of stakeholders. H-GAC staff will develop the study's marketing strategy. Public involvement is an important component of this plan and encourages innovative approaches that best meet the needs of the community for which this planning effort serves. H-GAC will take the lead on all marking activities as defined below. The Consultant will lead on-the-ground outreach and assist in executing marketing outreach activities by executing outreach activities and recommending the appropriate number and types of meetings to successfully carry out a thorough public outreach program throughout the duration of the study.

The goal is to ensure that the project team will utilize best practices to obtain participation, with the objective that the feedback obtained reflects constituents that represent the overall study area.

Target Audience - "Who"

The Public Participation Plan will focus on targeting three primary groups:

- Steering Committee
    - Non-elected public and private representatives to guide the technical development of the study
- Stakeholders

    - Study area landowners, businesses, and other interested parties
- General Public
    - Residents and individuals who frequent the study area

Elected Officials and Local Agencies

Elected officials and local agency key players are those that represent the cities, counties, and regional municipality governance. The key players will be part of the plan's Steering Committee, and there will be up to five Steering Committee meetings in which Kimley-Horn will be providing content that informs of the progress of the study along the way. A Data Analysis Workshop will be held with the Steering Committee (included as one of the five meetings) to discuss the study, analysis tools, and project challenges. The workshop will provide the Steering Committee with a better understanding of the study format, process, and outcomes.

Steering Committee Members representing:

- City of Pearland (Multiple Departments)
- City of Friendswood
- Brazoria County
- TxDOT

The anticipated meeting date and topics are as follows:

Meeting #1
Date: January 2024
Topics: Introduction, Data Collection, and public engagement efforts

Meeting #2
Date: May 2024
Topics: Existing Conditions, Analysis Workshop

Meeting #3
Date: September 2024
Topics: Draft thoroughfare plan - updates, recommendations

Meeting #4
Date: February 2025
Topics: Final thoroughfare plan – updates, projections recommendations and priority matrix

Stakeholder Groups:

Stakeholders represent entities, both public and private organizations, that have a vested interest in the production of this Mobility Study. Some key players from the Steering Committee may also be part of the stakeholder group. A maximum of four (4) Stakeholder meetings will be held with study area landowners, businesses, and other interested parties. Members will be identified during the beginning phases of the project. These stakeholder meetings will develop and/or get feedback on proposed recommendations and solicit and build continuing support for all recommendations. H-GAC will be responsible for reserving any meeting space, if required, and notifying meeting attendees. Meetings may be in person or virtual.

In addition to the two (2) Stakeholder meetings, the Consultant will provide up to three (3) presentations to City Council regarding the study goals and recommendations. It is envisioned that these updates will be provided by the Consultant to City Council during regularly scheduled City Council meetings.

Members will be identified during the beginning phases of the project by the Consultant, City and H-GAC. The list includes the following organizations within the community:

*TBD along with Steering Committee

The anticipated meeting dates and topics are as follows:

Meeting #1
Date: March 2024
Topics: Introduction, Data Collection, and public engagement efforts

Meeting #2
Date: November 2024
Topics: Draft thoroughfare plan - updates, draft cross-sections, and safety toolbox

Per the scope: H-GAC, with assistance from the Local Sponsor, will be responsible for reserving any meeting space, if required, and notifying meeting attendees. Meetings may be in person or virtual.

General Public:

The residents' feedback and input in this plan will be imperative, as they are the individuals that are impacted daily by the potential decisions from the Thoroughfare Plan. The public will be given opportunities to provide input and feedback through various methods including in-person meetings and online engagement. The Consultant will solicit public input on mobility planning issues and recommended improvements to the

Pearland roadway network up to three (3) times during the study. Potential public facing events include but are not limited to: Springfest, a Mobility Fair in conjunction with the Pearland 518 Corridor Study, and a library pop-up event.

Public Meeting #1 (Spring Fest)
Date: April 6, 2024
Purpose: Gather input on the location of specific needs and goals of the community

Public Meeting #2 (Pearland Farmer's Market)
Date: January 18, 2025
Purpose: Gather input on draft recommendations

Documentation of all meetings (prepare and submit summaries including meeting minutes, handouts, exhibits/display boards, sign-in sheets, and presentation within ten (10) business days of the meeting)

Per the scope: H-GAC will be responsible for reserving any meeting space/tables and providing public notification. The Consultant will provide H-GAC with information to use in advertising the public event and H-GAC will be responsible for the advertising of the event. Consultant will provide up to three (3) staff members for each public outreach event; H-GAC and Pearland will provide staff as well. It is anticipated that at least one of the outreach meetings will be held jointly with the H-GAC Pearland FM 518 project.

Online Engagement:

The Consultant will use one of the following two methods to communicate online with the public and all interested parties:

- Using H-GAC's licensed public outreach software, Engagement HQ, the Consultant will provide all relevant data, mapping, and other information to be hosted on the H-GAC outreach software, or:
- The Consultant will develop a GIS-based tool to review study information and solicit comments.
- The Consultant will develop an online survey to solicit public opinion on study area issues.

Round 1
Time Frame: April 1 – April 26, 2024

Round 2
Time Frame: January 14 – February 14, 2025

Per scope: The Consultant will design a survey to be hosted on H-GAC's website at two (2) points during the project, 1) early in the project to ask citizens about mobility concerns and priorities, and 2) later in the project to allow citizens to comment on the proposed recommendations. H-GAC is responsible for hosting any survey developed on its website including through any public outreach software.

Outreach

H-GAC will take the lead on all marketing activities as defined in the scope. The Consultant will lead on the ground outreach and assist in executing marketing outreach activities by executing outreach activities and recommending the appropriate number and types of meetings to successfully carry out a thorough public outreach program throughout the duration of the study.

H-GAC Website

H-GAC's existing website provides a convenient location to provide a link for the public to access the main project website on EngagementHQ. This link is available to anyone who already uses the H-GAC website for updates and those looking for information about the project specifically. EngagementHQ will have a link back to the H-GAC's webpage.

Social Media

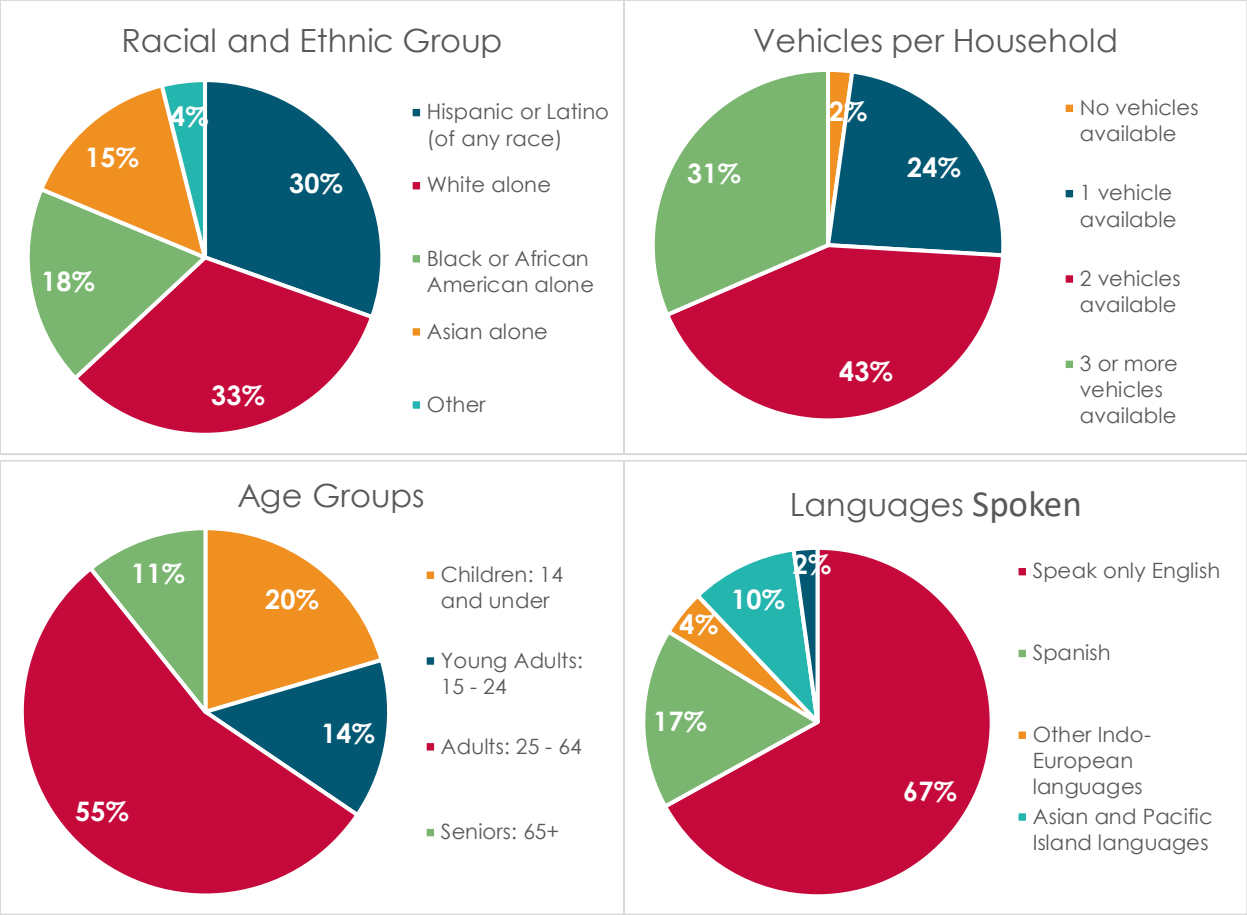
Social media will be a key tool for announcing events, spreading the word about the project across users' own social networks, and diversifying the ways in which people can discover and participate in the project. Social media is an open venue to discuss the project and share insights on its progress. H-GAC's existing social media pages will encourage participation at the project events, enable input from people who can't attend those events, and invite a review of draft documents and recommendations when these become available. The Consultant will provide information to H-GAC to update their social media sites; H-GAC will update its social media sites.

City of Pearland DEMOGRAPHICS (2022)

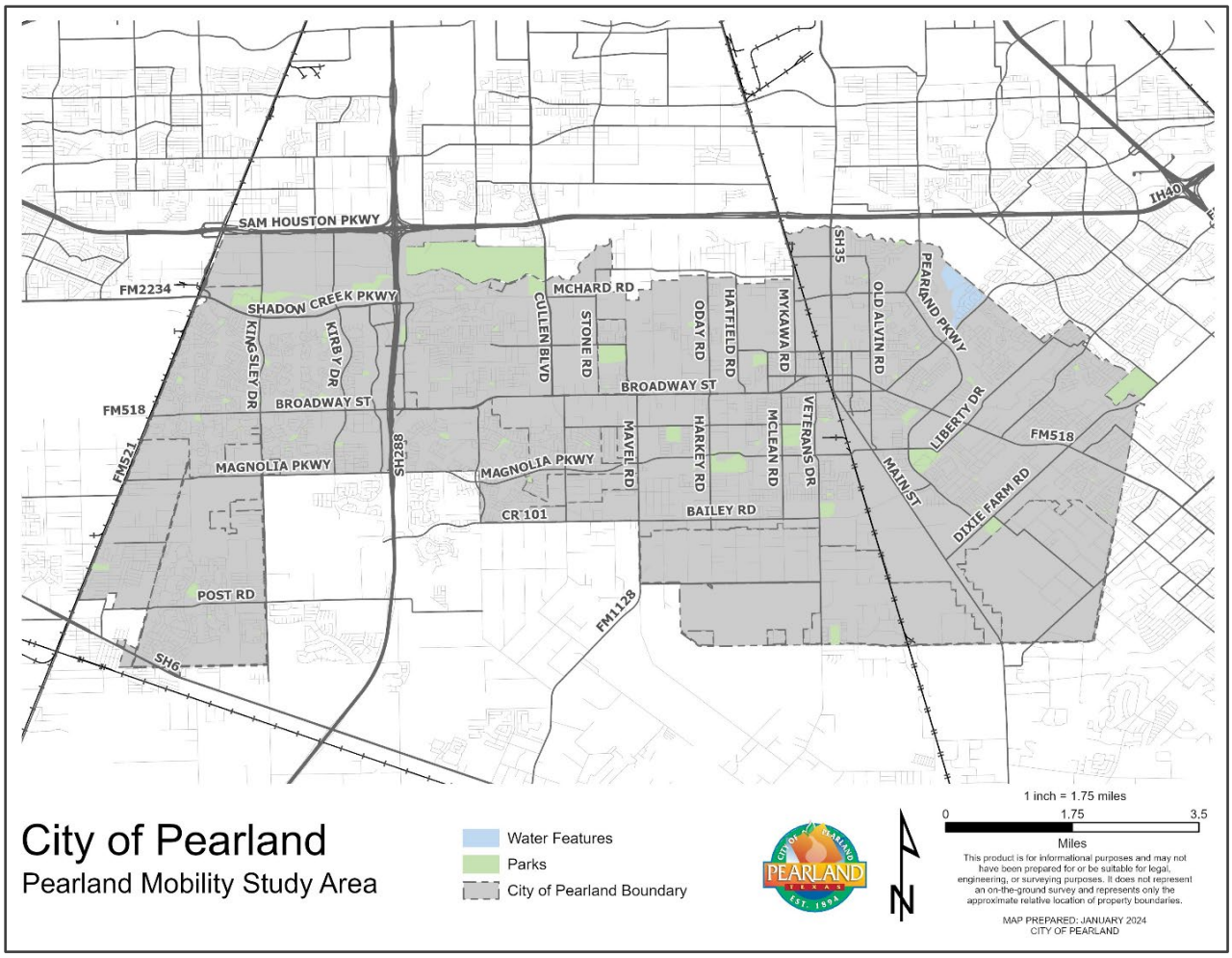
Source: United States Census Bureau ACS 1-Year Estimates

TOTAL POPULATION: 127,170

Primary Languages: 67% of the residents speak only English, followed by 17% of residents speak Spanish as their primary language.


Racial and Ethnic Group
30%
33%
18%
15%
4%
Hispanic or Latino (of any race)
White alone
Black or African American alone
Asian alone
Other
Vehicles per Household
2%
24%
43%
31%
No vehicles available
1 vehicle available
2 vehicles available
3 or more vehicles available
Age Groups
20%
14%
55%
11%
Children: 14 and under
Young Adults: 15 - 24
Adults: 25 - 64
Seniors: 65+
Languages Spoken
67%
17%
4%
10%
2%
Speak only English
Spanish
Other Indo-European languages
Asian and Pacific Island languages

City of Pearland Map



Kimley»Horn

Pearland Mobility Study
January 23, 2024, 3:00 PM
Virtual TEAMS Meeting
Agenda: Joint 1st Steering Committee Meeting – Pearland Mobility Study and FM 518 Corridor Study

Attendees:

Organization	Attendee	Role	Organization
Steering Committee Members	Qun Zhao	Project Manager	H-GAC
	Carlene Mullins	Principal Planner	H-GAC
	Trent Epperson	City Manager	City of Pearland
	Rajendra Shrestha	City Engineer	City of Pearland
	Yolci Ramirez	Traffic Engineer	City of Pearland
	Vance Wyly	Community and Development Director	City of Pearland
	Martin Griggs	Community and Development Deputy Director	City of Pearland
	Joshua Lee	Communications Director	City of Pearland
	Lorenzo Wingate	Public Works Director	City of Pearland
	John B. Thomas	Police Captain	City of Pearland
	Jack J. Taylor	Fire Department Chief	City of Pearland
	Jil Arias	Director of Engineering	City of Friendswood
	Jeffrey English	Project Manager	TxDOT- Houston District
Consultants	Michael Feeney	Project Manager – Pearland Mobility Study	Kimley-Horn
	Ryan Graves	Planner	Kimley-Horn
	Jenny Lai	Planner	Kimley-Horn
	Vivek Deshpande	Engineer	Kimley-Horn
	Payton Arens	Engineer	Kimley-Horn
	Linc Wright	Sub-Consultant	Gradient
	Thomas Duncan	Project Manager – FM 518 Corridor Study	ATG
	Ellen Soll	Deputy Project Manager	ATG
	Ariana Grant	Planner	ATG

ACTION ITEMS FOR PEARLAND MOBILITY STUDY

H-GAC:

- Carlene will check with H-GAC's IT department about hosting a sharefile for both projects to share data

Kimley-Horn:

- Send Joshua Lee a copy of the Public Participation Plan

DISCUSSION NOTES:

1. Rajendra Shrestha inquired about setting a meeting to discuss the Thoroughfare Plan update portion of the project
    a. The purpose of the meeting would be for the City to point out what worked, and what didn't work from the previous Thoroughfare Plan update
    b. Rajendra mentioned that the current GIS map does not represent the existing conditions today
    c. Mike Feeney mentioned further into the project, that there will be coordination and a plan for time to meet with City staff to discuss this

2. Kimley-Horn to coordinate with Joshua Lee, in addition to H-GAC on future public engagement efforts
    a. Joshua mentioned aiding the project team to send out community surveys, mailing, and various push notifications. He has access to digital signs throughout the city, to help expand that reach. He will look at his dedicated survey channels
    b. Kimley-Horn to send Joshua Lee the project's Public Participation Plan

3. Carlene Mullins raised the question of having joint meetings or separate meetings for both projects going forward
    a. Majority of the committee spoke up in support of joint meetings.

4. Yolci Ramirez asked if H-GAC can host a ShareFile for both project teams to share data in one location
    a. Carlene mentioned that she will reach out to H-GAC's IT department and let the consultants, and Yolci know.

NEXT STEERING COMMITTEE MEETING: Tentatively March, 2024





Pearland Mobility Study & FM 518 Corridor Study
Joint Steering Committee Meeting #1





January 23, 2024

Regional Collaboration • Transportation Planning • Multimodal Mobility

H-GAC
Houston-Galveston Area Council

Introductions



- City of Pearland – Trent Epperson, City Manager
- Study Teams
- Steering Committee Members

Project Team - Pearland Mobility Study



- Qun Zhao – H-GAC Project Manager
- Carlene Mullins – H-GAC Principal Planner

- Michael Feeney – Kimley-Horn Project Manager
- Ryan Graves – Kimley-Horn Planner
- Jenny Lai – Kimley-Horn Planner
- Vivek Desphande – Kimley-Horn Pearland Office

- T. Wayne Holcombe – Gradient
- Linc Wright - Gradient

Houston-Galveston Area Council

Kimley»Horn
Expect More. Experience Better.

GRADIENT

HDR

ATG | DCCM

EPS GROUP

Project Team - FM 518 Corridor Study

Houston-Galveston Area Council

Project Manager:
Carlene Mullins

Deputy Project Manager:
Qun Zhao

ATG

DCCM

Project Manager:
Thomas Duncan

Deputy Project Manager:
Ellen Soll

Kimley»Horn

HOLLAWAY
ENVIRONMENTAL + COMMUNICATIONS

CJ Hensch & Associates, Inc.
Specializing in Traffic Data Collection

Steering Committee



- Jildardo Arias – Friendswood City Engineer
- Carry Capers – Pearland Director of Parks & Recreation
- Jeffrey English – TxDOT Houston District
- Trent Epperson – Pearland City Manager
- Rajendra Hada - TxDOT Brazoria Area Engineer
- Matt Hanks – Brazoria County Engineer
- Ana Ramirez Huerta – TxDOT Houston District
- Tomas Kirn – TxDOT Houston District
- Joshua Lee – Pearland Director of Communications
- J. Taylor – Pearland Fire Chief
- Yolci Ramirez – Pearland Traffic Engineer
- Raj Shrestha – Pearland City Engineer
- Johnny Spires – Pearland Police Chief
- John Thomas – Pearland Police Captain
- Lorenzo Wingate – Pearland Public Works Director
- Vance Wyly – Pearland Director of Community Development

Role of the Steering Committee

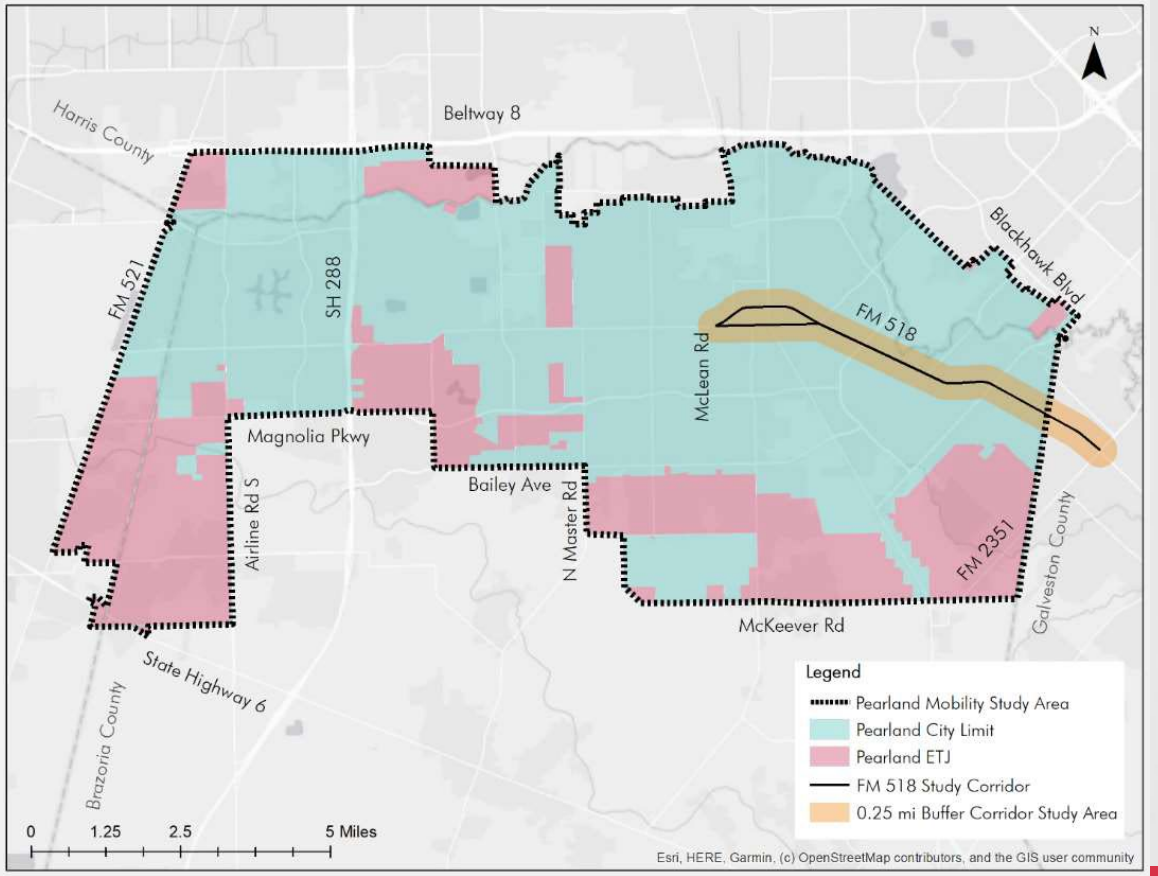


- Attend the five (5) planned meetings
- Provide feedback on project vision and goals
- Recommend stakeholder members
- Provide data as requested
- Review materials, provide input and technical oversight
- Guide plan implementation standards/criteria
- Attend and spread the word about upcoming public events

Pearland Mobility and FM 518 Studies



- Two Studies
- Two Study Teams
- Similar Study Areas
  - Pearland Mobility – mobility study
  - FM 518 – corridor study
- Common Steering Committee Members
- Same Project Sponsor







Pearland Mobility Study





Michael Feeney, P.E.
Kimley-Horn

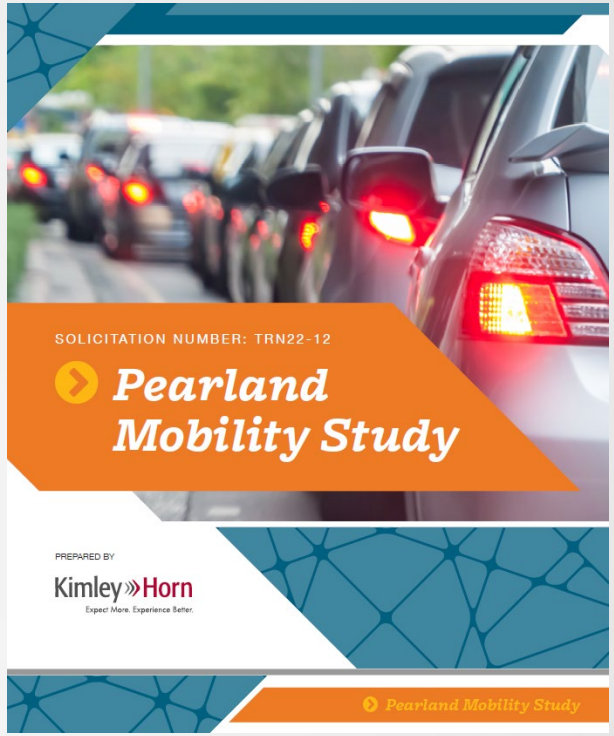
Regional Collaboration • Transportation Planning • Multimodal Mobility

Houston-Galveston Area Council

Agenda: Pearland Mobility Study



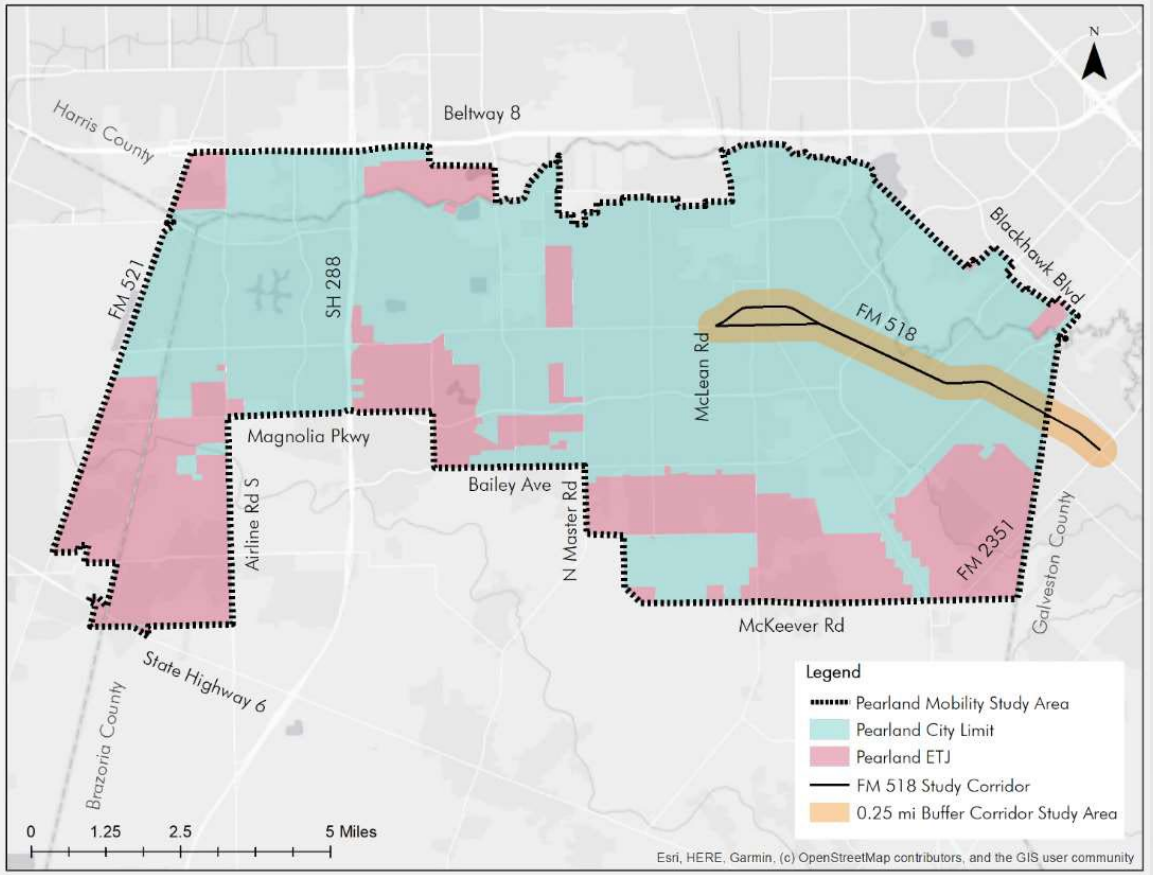
- Project background
- Project schedule
- Major scope items
- Draft vision and goals
- Previous studies
- Known issues
- Public outreach
- Committee input / data collection
- Next steps



Project Background

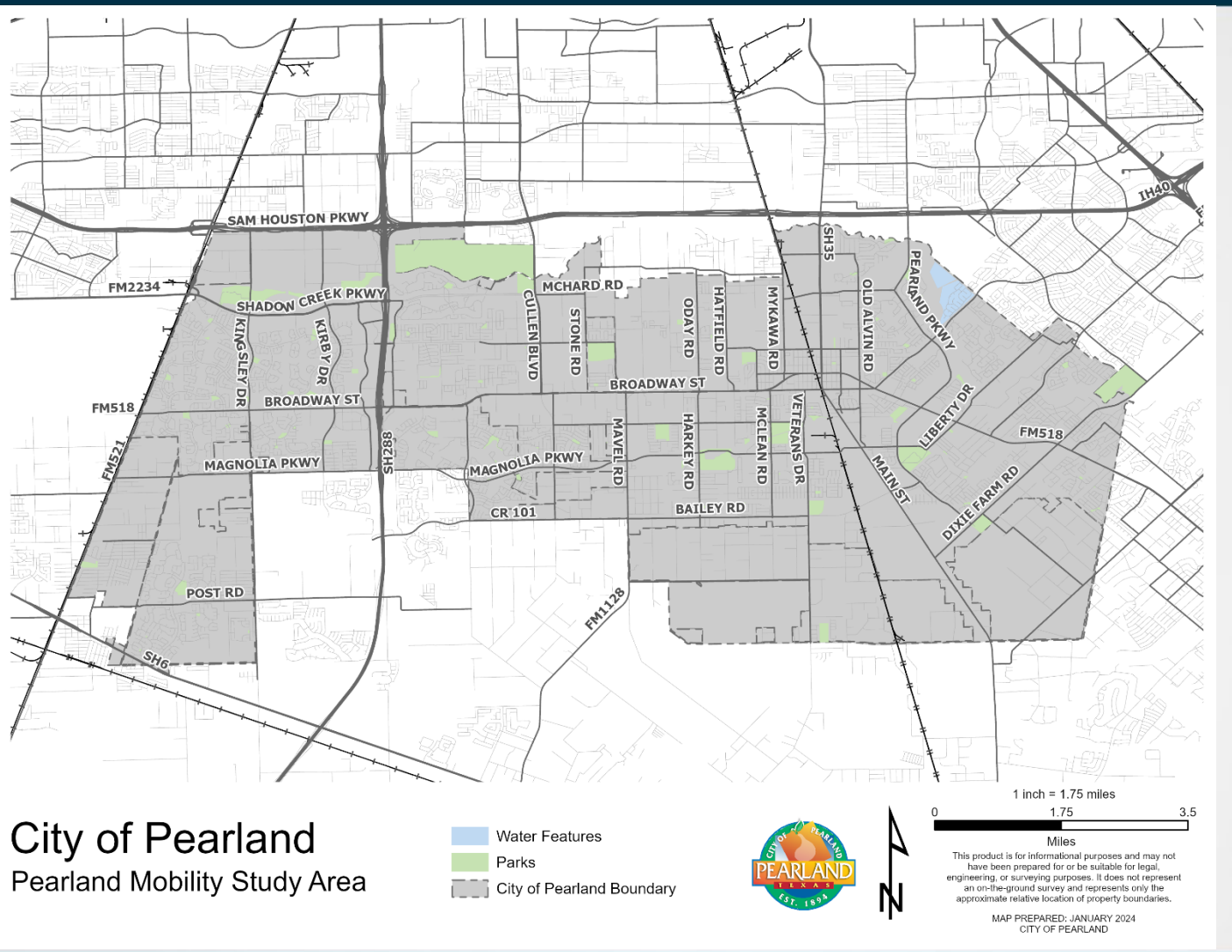


Pearland has become an increasingly desirable place to live and work, which presents both challenges and opportunities in terms of improving multimodal connectivity and mobility while accommodating growth and redevelopment across the city. The overarching challenge is how to reduce current congestion and a less-than-complete roadway network while also incorporating citizens priorities.



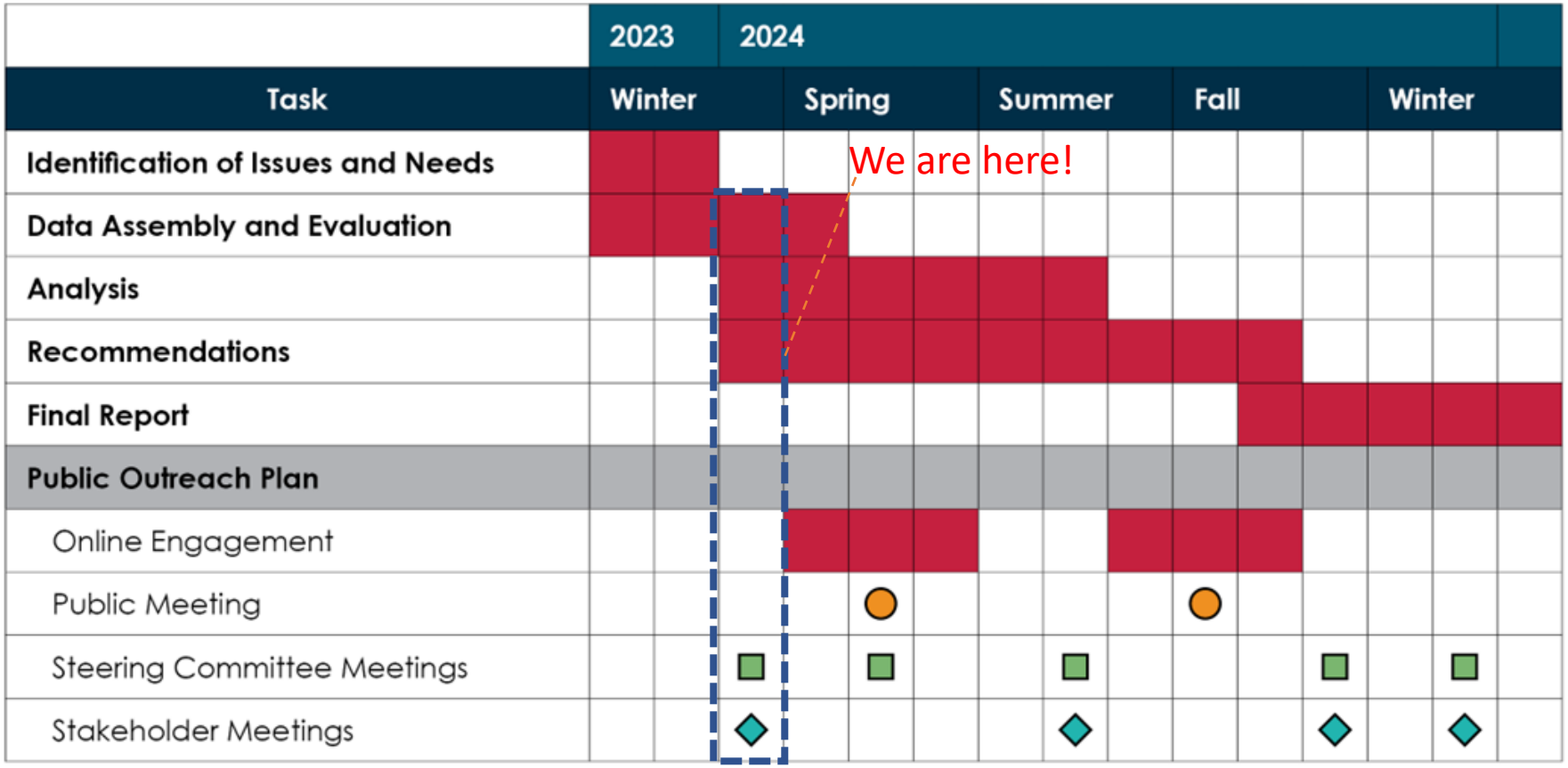
Study Area




SAM HOUSTON PKWY
IH40
FM2234
SHADOW CREEK PKWY
MCHARD RD
KINGSLEY DR
KIRBY DR
CULLEN BLVD
STONE RD
ODAY RD
HATFIELD RD
MYKAWA RD
SH35
OLD ALVIN RD
PEARLAND PKWY
BROADWAY ST
FM518
FM521
SH288
MAGNOLIA PKWY
MAVEL RD
HARKEY RD
MCLEAN RD
VETERANS DR
LIBERTY DR
MAIN ST
CR 101
BAILEY RD
DIXIE FARM RD
POST RD
FM1128
SH6
City of Pearland
Pearland Mobility Study Area
Water Features
Parks
City of Pearland Boundary
PEARLAND
TEXAS
EST. 1894
N
1 inch = 1.75 miles
0
1.75
3.5
Miles
This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.
MAP PREPARED: JANUARY 2024
CITY OF PEARLAND

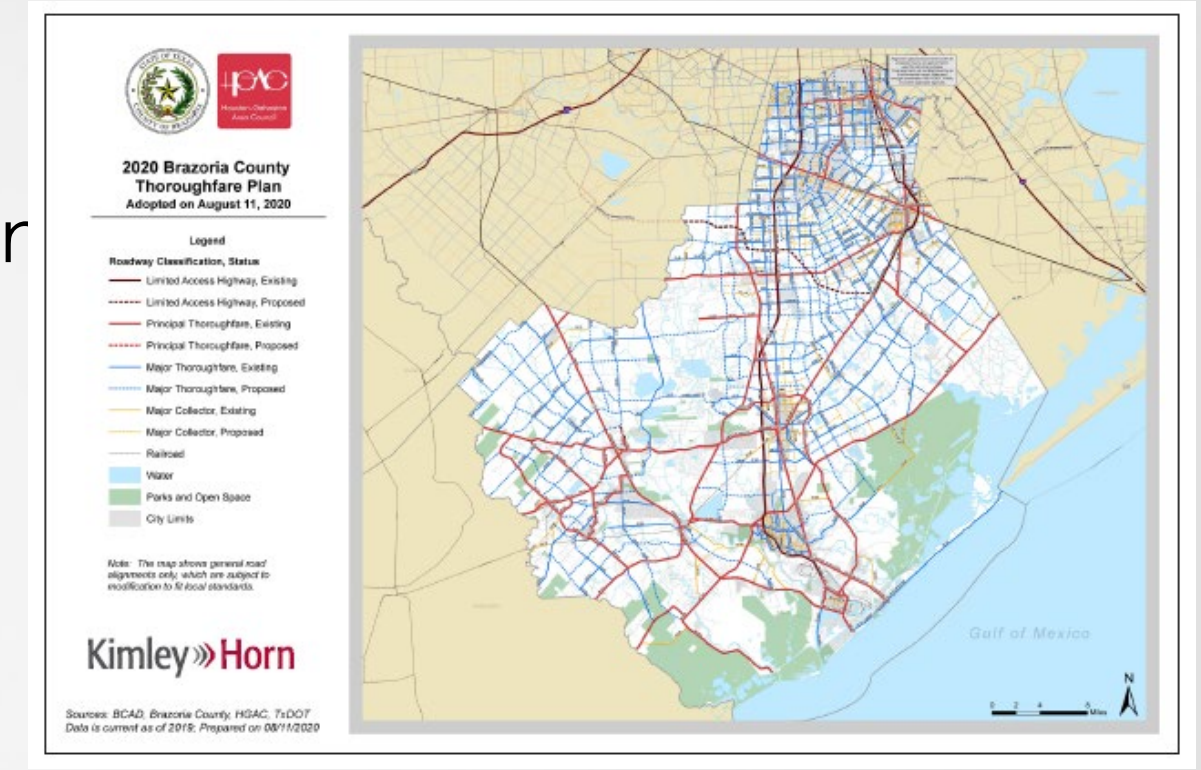
Schedule

Pearland Mobility Study



Major Scope Items

- Thoroughfare plan update
- Traffic analysis & recommendatior
- Multimodal concerns
- Policy review
- Project prioritization



Draft Vision Statement

The Pearland Mobility Plan will **prioritize multi-modal improvements** and strategies to **improve mobility for people, goods, and services; enhance safety**; and **accommodate growth**. Furthermore, the plan will develop a **trackable list of projects and initiatives** for the future.

Draft Goals

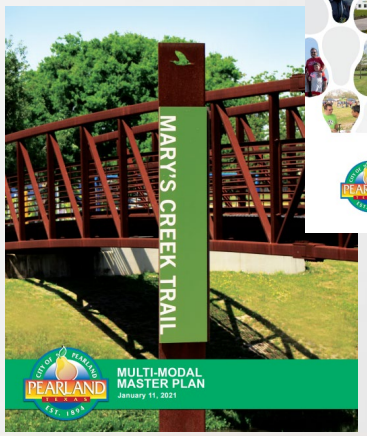
- Move People and Goods Efficiently
  - Updated Thoroughfare Plan
  - Traffic Analysis of Major Corridors & Key Intersections
  - Incorporate Transit Study Recommendations
- Improve Safety
  - Recommendations for Current Crash Hotspots
  - Recommendations on Improved Bike & Pedestrian Connections
- Strengthen Regional Economic Competitiveness
  - Transportation & Development Policy Review
  - Project prioritization & dashboard

Previous Studies

- Pearland Comprehensive Plan
- Pearland Transit Study
- Pearland Multi-Modal Master Plan
- 2021 Updates to Pearland Thoroughfare Plan
- PEDC Broadway Corridor Development Plan
- Pearland Parks Master Plan
- TxDOT FM 518 Widening





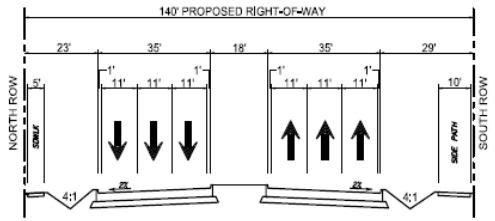


Known Issues

CHALLENGE	OPPORTUNITY
⊖ *There are numerous intersections at, or approaching, capacity throughout the City.* 	⊕ There is an opportunity to explore alternative intersection designs such as roundabouts, single point urban interchanges (SPUI), continuous green t's, etc. Kimley-Horn has studied and implemented alternative intersection designs across the county to improve both mobility and safety and worked on a number of projects using FHWA's Intersection Evaluation Control (ICE) framework.
⊖ *With the Comprehensive Plan proposing additional dense housing types and the Broadway Corridor Plan calling for more professional office space, the mobility plan will need to address this resulting future growth in trips.*	⊕ Completing an update to the City's Thoroughfare Plan as part of this project will allow for preservation of ROW for the projected growth in trips. Additionally, space for new or expanded utility lines and multimodal connections can be part of the suggested cross sections in the Thoroughfare Plan.

CHALLENGE	OPPORTUNITY
⊖ *There are multiple barriers to mobility throughout the city, including railroads, freeways, and waterways.* 	⊕ We will look at available opportunities to provide connections across these barriers where possible by partnering with TxDOT, Brazoria County, and the Brazoria Drainage District No. 4—these partnerships may yield opportunities for shared funding of projects and may result in projects that carry bicycle and pedestrian facilities across these barriers.

Known Issues

CHALLENGE	OPPORTUNITY
⊖ *TxDOT is widening FM 518 from SH 288 to McLean Road; however, they did not extend their work to SH 35 or the east.* 	⊕ There is an opportunity for further coordination with TxDOT and others—we will coordinate closely with the parallel H-GAC FM 518 Study to make sure our recommendations work with those developed with this concurrent effort and also offer potential solutions for the FM 518/Walnut Street split developed in our previous Broadway Corridor Plan. PEDC partnered with TxDOT to reduce the proposed ROW, and we can continue this partnership for any TxDOT facility within the City—this can lead to forming partnerships with TxDOT (and other relevant agencies) to fund improvements beneficial to all.
⊖ *The continued development of Pearland as a brand and an increasingly desirable place to live and do business.* 	⊕ Opportunities exist to develop enhanced intersections and street cross sections that include additional landscaping as well as public art, illumination, and other branding features to elevate the cultural identity of the city. Streetscapes are one of the first elements that visitors to the city see; a well-executed mobility plan in coordination with PEDC's branding efforts identifies these details that effect other city priorities such as economic development.

CHALLENGE	OPPORTUNITY
⊖ *Pearland has developed a strong set of individual trails for non-motorized mobility; however, gaps exist between these facilities.*	⊕ Building on the existing Multimodal Plan and Parks and Recreation Master Plan, we will identify where gaps exist and include connections between facilities. Implementation of these connections will be included as part of any applicable recommended project.
⊖ *A majority of trips are made by automobile.* 	⊕ In addition to bicycle and pedestrian opportunities previously mentioned, we will work to incorporate recommendations from the ongoing H-GAC Pearland Transit Study. Additionally, we have team members with extensive transit experience that may offer new solutions.

Public Outreach



The public will be given opportunities to provide input and feedback through various methods including three (3) in-person meetings and two (2) rounds of online engagement.

Public Meeting #1 (Spring Fest)

Date: March 2024
Purpose: Gather input on the location of specific needs and goals of the community

Public Meeting #2

(Mobility Fair with Pearland 518 Corridor Study)

Date: June 2024
Purpose: Gather input on the draft thoroughfare and cross-sections

Public Meeting #3 (Library Pop-up Event)

Date: September 2024
Purpose: Gather input on draft recommendations



Photo: *Kimley-Horn staff at Pearland Springfest 2022 for the Pearland Comprehensive Plan*

Online Engagement



Using H-GAC's licensed public outreach software, Engagement HQ, survey/interactive maps will be hosted on H-GAC's website at two (2) points during the project:

Round 1

Time Frame: February - April 2024

Content: Feedback on mobility concerns and priorities

Round 2

Time Frame: July – September 2024

Content: Feedback on the proposed recommendations

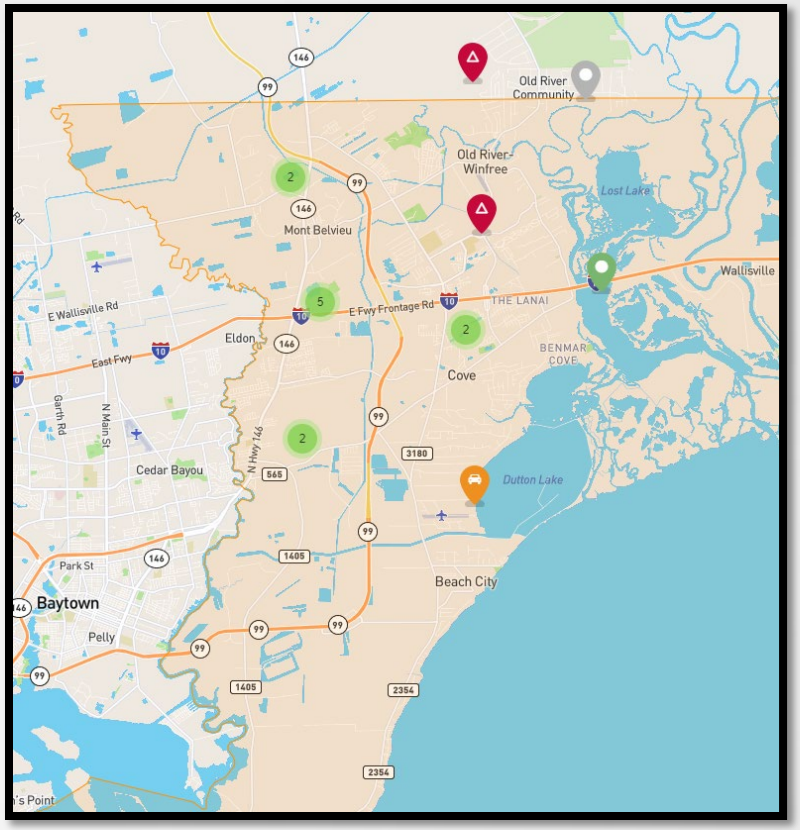


Photo: *The map shown in this photo was created using Engagement HQ for the Chambers County Thoroughfare Plan.*

Data Collection



- Currently analyzing existing/provided data
- Further data to include:
  - Turning movement and daily traffic counts (All)
  - Traffic signal timings (Pearland)
  - Crash data (TxDOT)
  - Bike-Ped data / Strava (Pearland, Kimley-Horn)
  - Travel demand model (H-GAC)
  - Latest CIPs (Pearland, Brazoria County, TxDOT)

Questions on Pearland Mobility Study?



For more information:

- Qun Zhao, H-GAC Project Manager
  Qun.Zhao@h-gac.com

- Carlene Mullins, H-GAC Deputy Project Manager
  Carlene.Mullins@h-gac.com

- Website
  www.engage.h-gac.com




FM 518 Corridor Study




Ellen Soll, AICP
ATG

Regional Collaboration • Transportation Planning • Multimodal Mobility

Houston-Galveston Area Council

Agenda: FM 518 Corridor Study



- Project overview
- Major scope items
- Project schedule
- Draft vision and goals
- Public engagement
- Previous studies
- Data collection
- Key issues
- Next steps

Project Overview

- Corridor study on FM 518/ Broadway Street from McLean Road to Edgewood Drive/FM 2351
  - Evaluation of converting Walnut Drive and Broadway Street/FM 518 from McLean Road to Barry Rose Road into a one-way pair
- 18-month study to develop and analyze alternatives for both the corridor and one-way pair (including a right-of-way impacts)

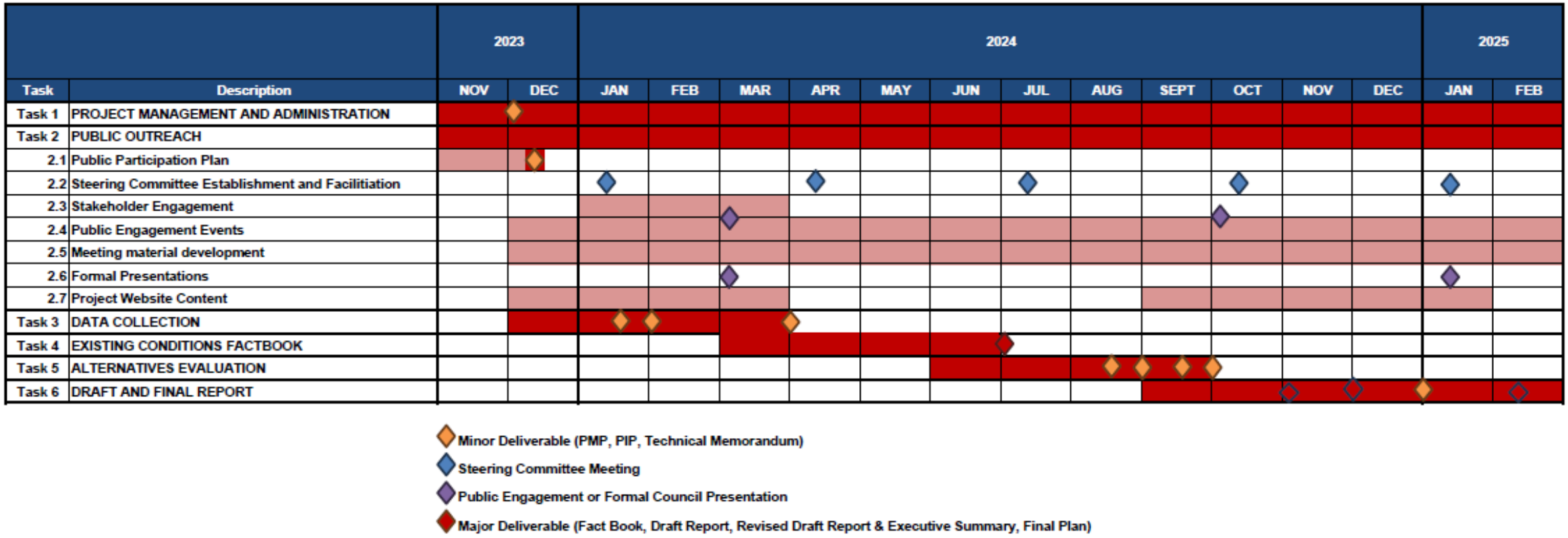


Major Scope Items



- Project Management Plan
- Public Participation Plan
  - Online and In Person Engagement
  - Meeting Materials / Summaries
- Existing Conditions Factbook
- Alternatives Evaluation Technical Memorandum
- Draft & Final Report

Project Schedule



		2023		2024												2025	
Task	Description	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB
Task 1	PROJECT MANAGEMENT AND ADMINISTRATION																
Task 2	PUBLIC OUTREACH																
2.1	Public Participation Plan																
2.2	Steering Committee Establishment and Facilitiation																
2.3	Stakeholder Engagement																
2.4	Public Engagement Events																
2.5	Meeting material development																
2.6	Formal Presentations																
2.7	Project Website Content																
Task 3	DATA COLLECTION																
Task 4	EXISTING CONDITIONS FACTBOOK																
Task 5	ALTERNATIVES EVALUATION																
Task 6	DRAFT AND FINAL REPORT																

Vision and Goals



Proposed Vision

To create a safe, sustainable, and accessible corridor that prioritizes the needs of all users while improving traffic flow

Proposed Goals

1. Improve Safety
2. Achieve and Maintain a State of Good Repair
3. Move People and Goods Efficiently
4. Strengthen Regional Economic Competitiveness
5. Conserve and Protect Natural and Cultural Resources

Vision and Goals

1
Improve Safety

Reduce the number of crashes along the corridor by implementing traffic calming measures, improving pedestrian and bicycle infrastructure, and enhancing visibility at intersections

2
Achieve and Maintain a State of Good Repair

Provide well-maintained, reliable and safe facilities throughout the FM 518 Corridor.

3
Move People and Goods Efficiently

Optimize the transportation network by reducing conflict points, controlling access, enhancing connectivity, improving traffic flow, and providing safe and convenient infrastructure for multimodal transportation

Vision and Goals

4

Strengthen Regional Economic Competitiveness

Improve regional economic competitiveness through improved traffic flow and providing safe and efficient access to adjacent businesses and regional opportunities

5

Conserve and Protect Natural and Cultural Resources

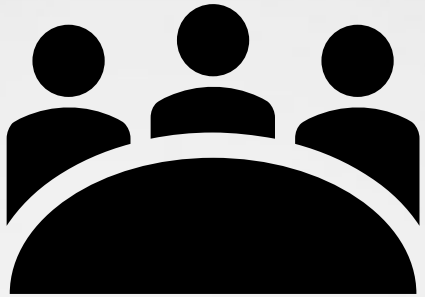
Focus on environmentally sustainable practices and preserve the heritage of the community, ensuring the longevity and integrity of both ecological and cultural assets while reducing traffic related emissions by shortening idling time at intersections

Local Engagement



Steering Committee

Review and provide input to items such as data elements and progress on analyses, facility recommendations, and implementation plans.



Stakeholder Meetings

Compromised of elected officials, and non-governmental representatives such as First Responders, Religious Leaders, Pearland ISD, Chamber of Commerce/Business Groups, Citizen Groups, and members of the Hike and Bike Community.



General Public

Provide valuable input in public outreach and involvement that will assist in guidance of plan.

- 4 stakeholder groups to engage through focus group meetings

Suggested Tabling Locations

Location	Address	Hours	Type of Location
Aldi	**3412 E Broadway St, Pearland, TX 77581**	**9 AM - 8 PM**	**Grocery Store**
H-E-B	**2710 Pearland Pkwy, Pearland, TX 77581**	**6 AM - 11 PM**	**Grocery Store**
United States Postal Service	3519 E Walnut St, Pearland, TX 77581	8:30 AM - 5:30 PM	Post Office
Pearland Library	Tom Reid Building, 3522 Liberty Dr, Pearland, TX 77581	10 AM - 9 PM	Library
Walmart Supercenter	1710 Broadway St, Pearland, TX 77581	6 AM - 11 PM	Big Box Store
Kroger	151 N Friendswood Dr, Friendswood, TX 77546	6 AM - 11 PM	Grocery Store
United States Postal Service	310 Morningside Dr, Friendswood, TX 77546	8:30 AM - 5:30 PM	Post Office
Friendswood Public Library	416 S Friendswood Dr, Friendswood, TX 77546	10 AM - 9 PM	Library
H-E-B	701 W Parkwood Ave, Friendswood, TX 77546	6 AM - 11 PM	Grocery Store

Planned Events



Public Meeting #1 (Spring Fest)
Date: March 2024

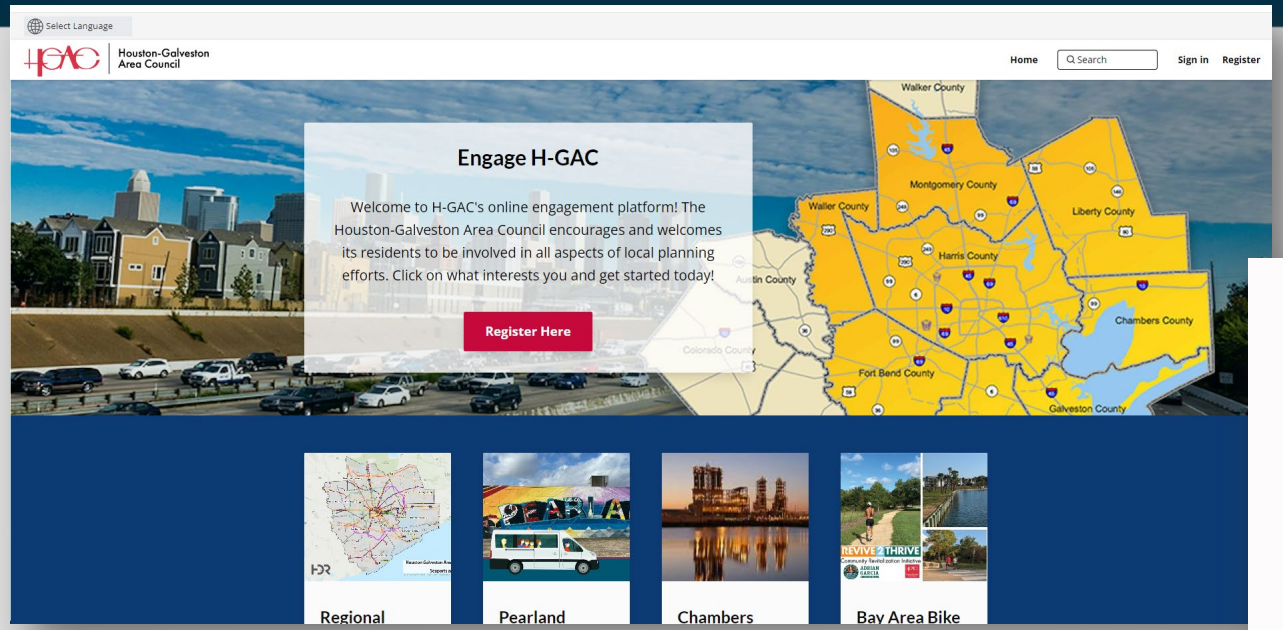
Public Meeting #2 (Mobility Fair with Pearland 518 Corridor Study)
Date: June 2024

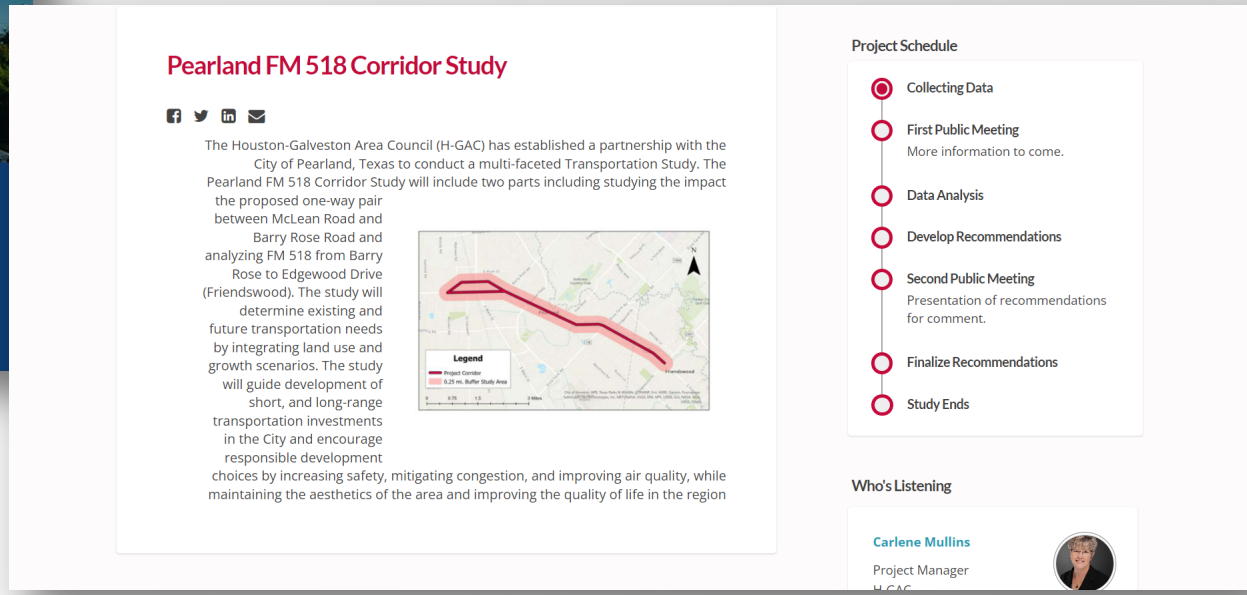
Public Meeting #3 (Suggested Tabling Locations)
Date: Fall 2024

Outreach Purpose

- Collect background information expressing the need and context for the study
- Answer questions from the public and provide answers to frequently asked questions
- Show the calendar/announcements of meetings and special events
- Comment Collection
- Surveys

Website Examples



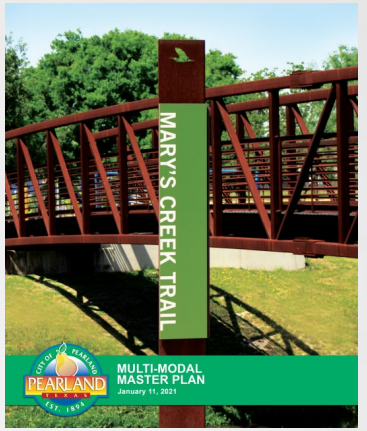


- Survey Tools
- Online GIS
- Comment Collection
- Background information expressing the need and context for the study
- Content and/or link for Informational Dashboard
- Frequently asked questions
- Calendar/announcements of meetings and special events

www.engage.h-gac.com

Previous Studies

- Pearland Comprehensive Plan
- Pearland Community Strategic Plan
- Pearland Capital Improvement Program
- Pearland Multi-Modal Master Plan
- Broadway Street Corridor Development Plan
- Pearland Transit Needs Assessment and Feasibility Study
- TxDOT FM 518 Widening
- H-GAC 2045 Regional Transportation Plan
- H-GAC 2023-2026 Transportation Improvement Program







Data Collection



- **Currently analyzing existing/provided data**
  - Crash Data (TxDOT)
  - Traffic Studies (Pearland)
  - Travel Demand Model (H-GAC)
- **Further data to include:**
  - Turning movement and daily traffic counts (Pearland, ATG)
  - Traffic signal timings (Pearland)
  - Bike-Ped data (Pearland)
  - Latest CIPs (Pearland, Friendswood, Brazoria County, TxDOT)

Key Issues

- TxDOT's Project ends prior to SH 35
- Historic Properties in Old Townsite of Pearland
- Property Setbacks
- High Traffic corridor
- Lack of Access Management
- Intersection Alignments of less than 75 degree
- High Crash Rates
- Retrofitting a median will be difficult

What are your key issues and concerns on the corridor?

Next Steps



- Data/Information Request & Collection
  - Traffic
- Public Engagement Planning:
  - Website Set Up
  - Reserve Booths / Tabling Locations
  - Stakeholder Group Lists
- Plan Review Drafted
- Existing Conditions Analysis

Next Steering Committee Meeting:

Spring 2024

Questions?



- Carlene Mullins, FM 518 Project Manager
  Carlene.Mullins@h-gac.com
  832-681-2585

- Qun Zhao, Pearland Mobility Project Manager
  Qun.Zhao@h-gac.com
  832-681-2580

www.engage.h-gac.com

H-GAC PEARLAND MOBILITY STUDY & FM 518 CORRIDOR STUDY

STEERING COMMITTEE MEETING #2

May 30, 2024
2:00-4:00pm
TEAMS Conference Call

Participants

Trent Epperson (City of Pearland)
Martin Griggs (City of Pearland)
Joshua Lee (City of Pearland)
Yolci Ramirez (City of Pearland)
Carry Capers (City of Pearland)
Vance Wyly (City of Pearland)
Rajendra Shrestha (City of Pearland)
Jil Arias (City of Friendswood)
Heather Van Dine (City of Friendswood)
Rajendra Hada (Brazoria County)
Qing Li (TxDOT)
Jeffrey English (TxDOT)
Carelene Mullins (H-GAC)
Qun Zhao (H-GAC)
Rodney Sigua (H-GAC
Vivek Deshpande (Kimley Horn)
Jenny Lai (Kimley Horn)
Ellen Soll (ATG)
Thomas Duncan (ATG)
Ariana Grant (ATG)

AGENDA

1. Introduction
    a. Meeting Overview
    b. Study Teams
    c. Steering Committee Members

2. Pearland Mobility Study
    a. Draft vision and goals – Vivek requesting changes to the vision statement, otherwise requesting adoption.
        - TxDOT wanted to understand how the goals were determined. K-H mentioned that the Vision was developed in-line with other City priorities, plans, and overall H-GAC priorities for the region. The goals were developed as specific actions that would help to achieve the vision of the project
        - City asked if the Vision includes Thoroughfare Plan. K-H confirmed that one of the mail Goals of the project is to review and update the Thoroughfare Plan.
        - City commented to maintain consistency with Pearland Comp Plan Goals
        - TxDOT made a comment to consider impacts to traffic, employment, and mobility in Pearland resulting from freight, pharmaceutical and medical industry base in the City
    b. Project schedule
    c. Existing conditions
        - City and TxDOT commented on missing count locations along FM 518 from SH 288 to Walnut Street. K-H confirmed that existing traffic counts were not collected on that segment due to proposed TxDOT project on that segment to widen FM 518 from four lanes to six lanes section. Existing conditions heat map captures crashes in the last seven years

- TxDOT commented to add a note on the map to clarify that due to proposed TxDOT widening project, traffic counts or any intersection improvements was left out of the current project scope.

d. Public outreach
   - TxDOT commented that for future public engagement to look at including an option to see how many people are access FM518 for either working in healthcare or accessing healthcare, to specify which one.

e. Next steps
   - Review and update long range travel demand model
     - TxDOT commented to consider travel patterns due to medical centers within the city – both for employees and patients
   - Revie w and update Thoroughfare Plan
   - Develop Safety Tool box
   - Review and evaluate short term intersection improvements

3. FM 518 Corridor Study
   a. Project overview
      - Project schedule
      - Vision and goals
   b. Public engagement
      - Spring Fest
      - Online efforts
        - Joshua Lee wanted to confirm that ATG was pleased with the public involvement results
          - ATG said that they will be using additional outreach techniques in the future to get more input from the public and businesses.
      - Focus group meetings
        - Trent wanted to confirm the Chamber of Commerce was included in the business stakeholder focus group development and suggests a continuous engagement with Chamber of Commerce can boost business input
          - HGAC confirmed that there was continuous outreach to the Chamber but is expecting more turnout for when alternatives get developed.
        - Martin wanted to confirm how many of the businesses were along the one way pair.
          - ATG said about half of the list, but 4-5 attended.
          - Martin would like to figure out better ways to engage businesses because of the importance of this input that will also work directly with the Old Town Revitalization plan.
   c. Existing Conditions
      - Trent Epperson noticed that on the maps with shared lanes and bike lanes that Dixie Farm Road is actually an existing bike lane and not a share lane
      - On the "Limited English Household" map, the area across the parkway of FM518 with a high level of limited English households is actually a new master plan community, Action Item: ATG will

double check this data

- Rajendra wanted to know more about the operational analysis and what that could look like
    - ATG discussed the capacity alternatives, medians, and traffic patterns
- ATG discussed the City's future improvements for Pearland Pkwy will be included in the no build
    - Rajendra wants to confirm that TxDOT is onboard with this as the City continues to make these changes on Broadway independently and can provide this if it is useful for the study.
- Old Town Revitalization plan is currently in the works with Olsson studios, and Martin would like to team up with ATG to have a share of ideas before the end of summer.
    - Martin will email the PMs information for this coordination

d. Next steps
    - Second stakeholder meeting tentatively in July
    - Meeting with Olsson studios to discuss the Old Town Revitalization plan and FM518





Pearland Mobility Study & FM 518 Corridor Study
Joint Steering Committee Meeting # 2





May 30, 2024

Regional Collaboration • Transportation Planning • Multimodal Mobility

H-GAC
Houston-Galveston Area Council

Agenda



- Meeting Overview
- Pearland Mobility Study
- FM 518 Corridor Study

Introductions



- City of Pearland
- Steering Committee Members
- Study Teams

Steering Committee



- Jildardo Arias – Friendswood City Engineer
- Carry Capers – Pearland Director of Parks & Recreation
- Jeffrey English – TxDOT Houston District
- Trent Epperson – Pearland City Manager
- Martin Griggs – Pearland Deputy Director of Community Development
- Rajendra Hada - TxDOT Brazoria Area Engineer
- Matt Hanks – Brazoria County Engineer
- Ana Ramirez Huerta – TxDOT Houston District
- Thomas Kirn – TxDOT Houston District
- Joshua Lee – Pearland Director of Communications
- J. Taylor – Pearland Fire Chief
- Yolci Ramirez – Pearland Traffic Engineer
- Raj Shrestha – Pearland City Engineer
- Johnny Spires – Pearland Police Chief
- John Thomas – Pearland Police Captain
- Heather Van Dine – Friendswood Assistant Director Operations of Engineering Department
- Lorenzo Wingate – Pearland Public Works Director
- Vance Wyly – Pearland Director of Community Development

Project Team - Pearland Mobility Study



- Qun Zhao – H-GAC Project Manager
- Carlene Mullins – H-GAC Principal Planner

- Vivek Deshpande – Kimley-Horn Project Manager
- Jenny Lai – Kimley-Horn Planner
- Ryan Graves – Kimley-Horn Planner

Houston-Galveston Area Council

Kimley»Horn
Expect More. Experience Better.

GRADIENT

HDR

ATG | DCCM

EPS GROUP

Project Team - FM 518 Corridor Study



Houston-Galveston Area Council

Project Manager:
Carlene Mullins

Deputy Project Manager:
Qun Zhao

ATG

DCCM

Project Manager:
Thomas Duncan

Deputy Project Manager:
Ellen Soll

Kimley»Horn

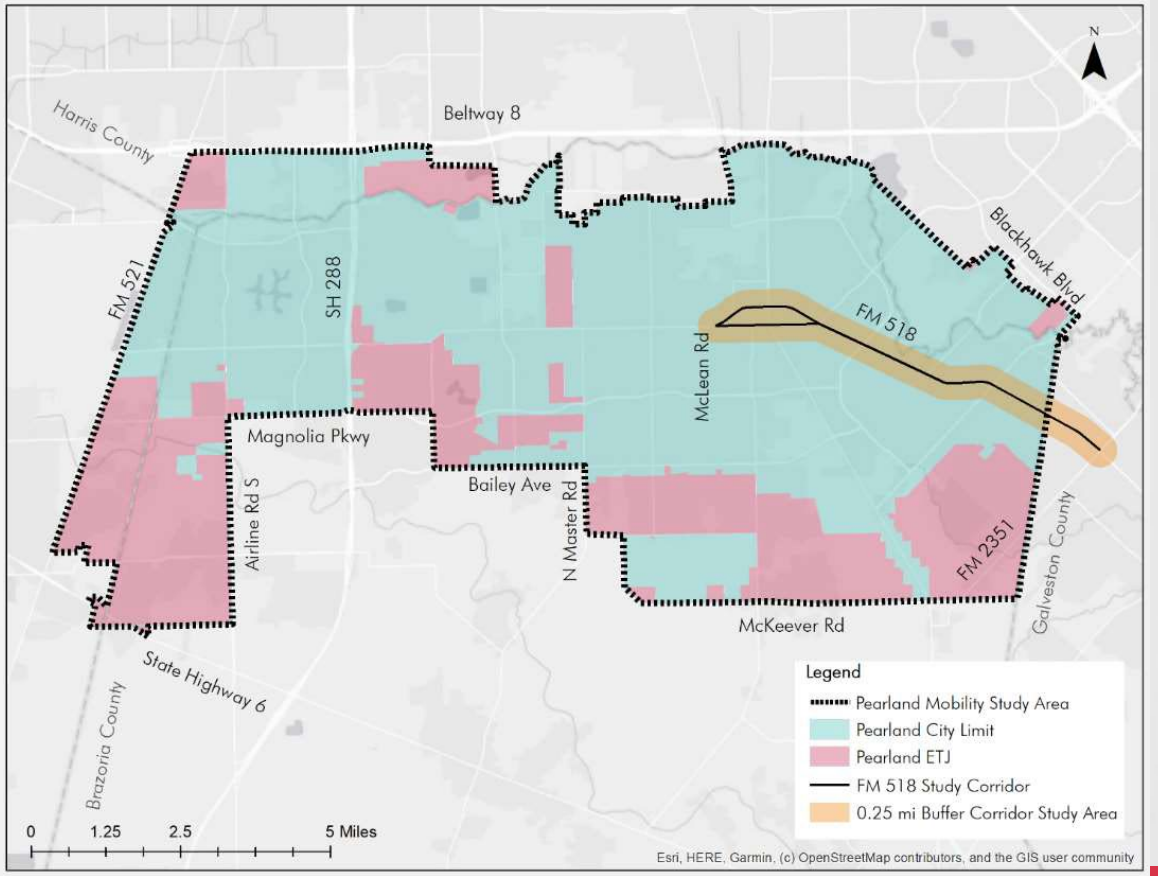
HOLLAWAY
ENVIRONMENTAL + COMMUNICATIONS

CJ Hensch & Associates, Inc.
Specializing in Traffic Data Collection

Pearland Mobility and FM 518 Studies



- Two Studies
- Two Study Teams
- Similar Study Areas
  - Pearland Mobility – mobility study
  - FM 518 – corridor study
- Common Steering Committee Members
- Same Project Sponsor







Pearland Mobility Study





Kimley-Horn

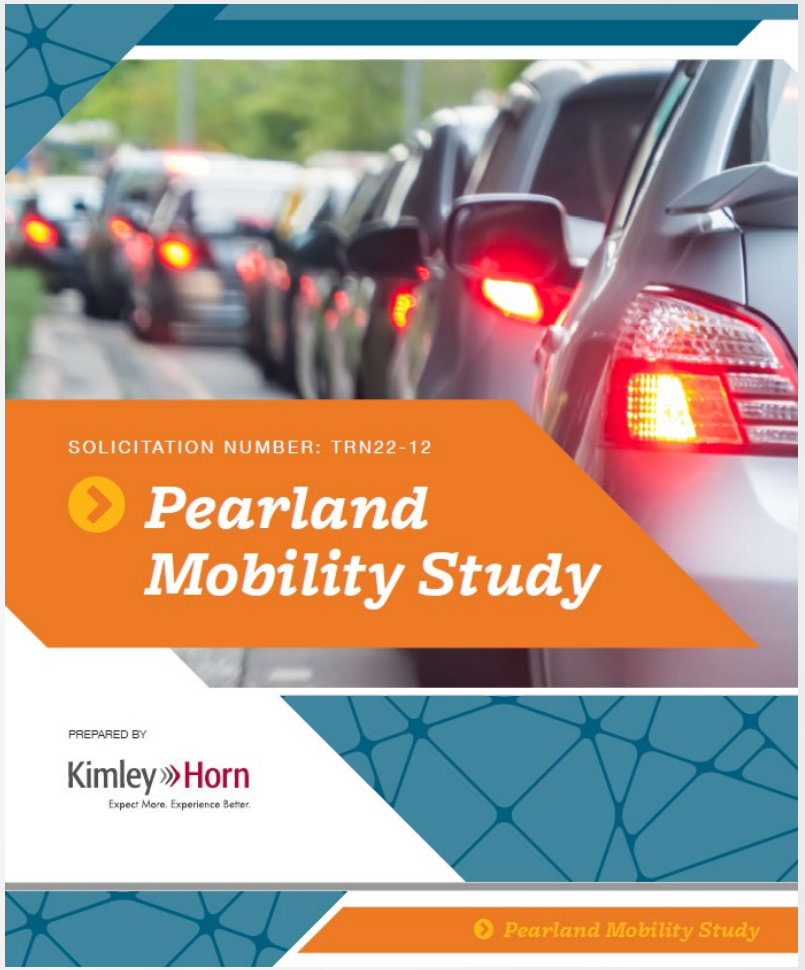
Regional Collaboration • Transportation Planning • Multimodal Mobility

H-GAC
Houston-Galveston Area Council

Agenda: Pearland Mobility Study



- Draft vision and goals
- Project schedule
- Existing conditions
- Public outreach
- Next steps



Draft Vision Statement

The Pearland Mobility Plan will **prioritize multi-modal improvements** and strategies to **improve mobility for people, goods, and services; enhance safety**; and **accommodate growth**. Furthermore, the plan will develop a **trackable list of projects and initiatives** for the future.

Draft Goals

- Move People and Goods Efficiently
  - Updated Thoroughfare Plan
  - Traffic Analysis of Major Corridors & Key Intersections
  - Incorporate Transit Study Recommendations
- Improve Safety
  - Recommendations for Current Crash Hotspots
  - Recommendations on Improved Bike & Pedestrian Connections
- Strengthen Regional Economic Competitiveness
  - Transportation & Development Policy Review
  - Project prioritization & dashboard

Schedule



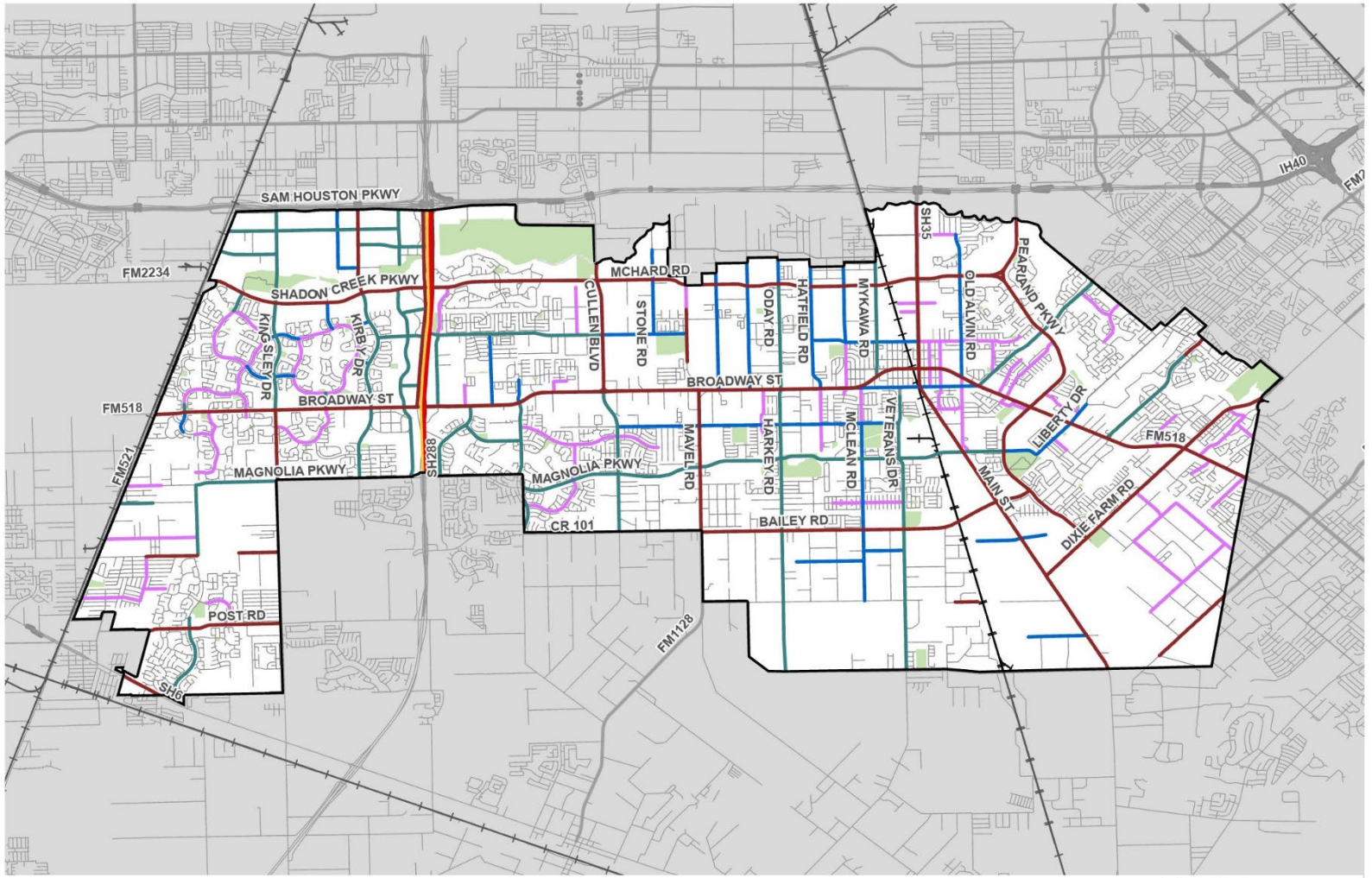
Pearland Mobility Study

Task	2023 Winter	Spring	Summer	Fall	2024 Winter
Identification of Issues and Needs					
Data Assembly and Evaluation					
Analysis					
Recommendations					
Final Report					
Public Outreach Plan					
Online Engagement					
Public Meeting					
Steering Committee Meetings					
Stakeholder Meetings					

We are here!

Existing Conditions Maps





City of Pearland

Pearland Mobility Study

Kimley»Horn

Existing Road Classifications

- Freeway
- Toll-Lane
- Major Thoroughfares
- Secondary Thoroughfares
- Major Collector
- Minor Collector
- Parks
- Railroads
- City Limits

N

1 inch = 1.75 miles

0 1.75 3.5

Miles

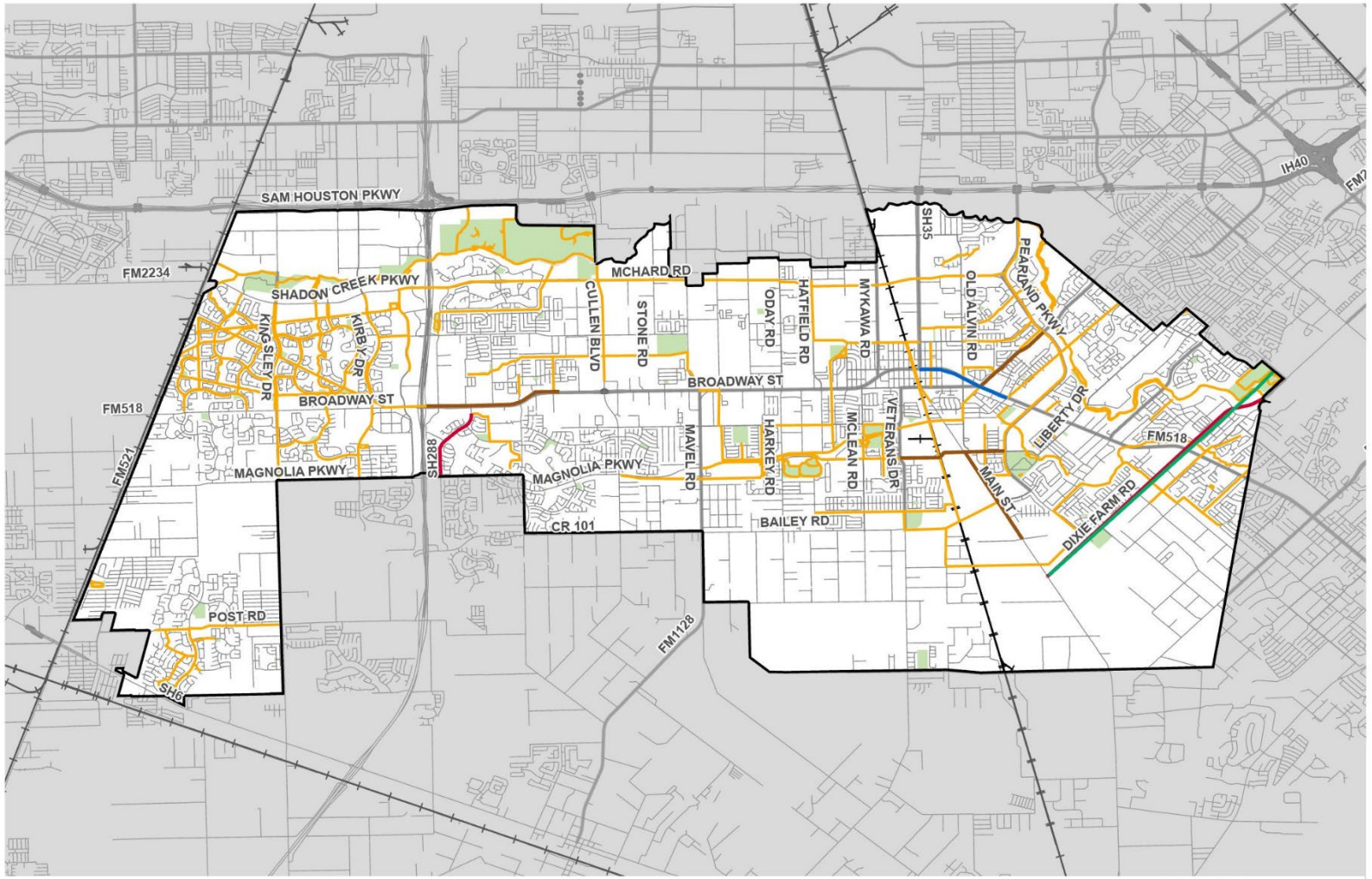
This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: May 2024
CITY OF PEARLAND

Houston-Galveston Area Council

Existing Conditions Maps





City of Pearland

Pearland Mobility Study

Kimley»Horn

Bicycle/Pedestrian Facility Type

- Shared Use Path/Trail
- Pedestrian Trails
- Signed Shared Roadway
- Bike Lane
- Signed Shoulder Bike Route
- Parks
- Railroads
- City Limits

N

1 inch = 1.75 miles

0 1.75 3.5

Miles

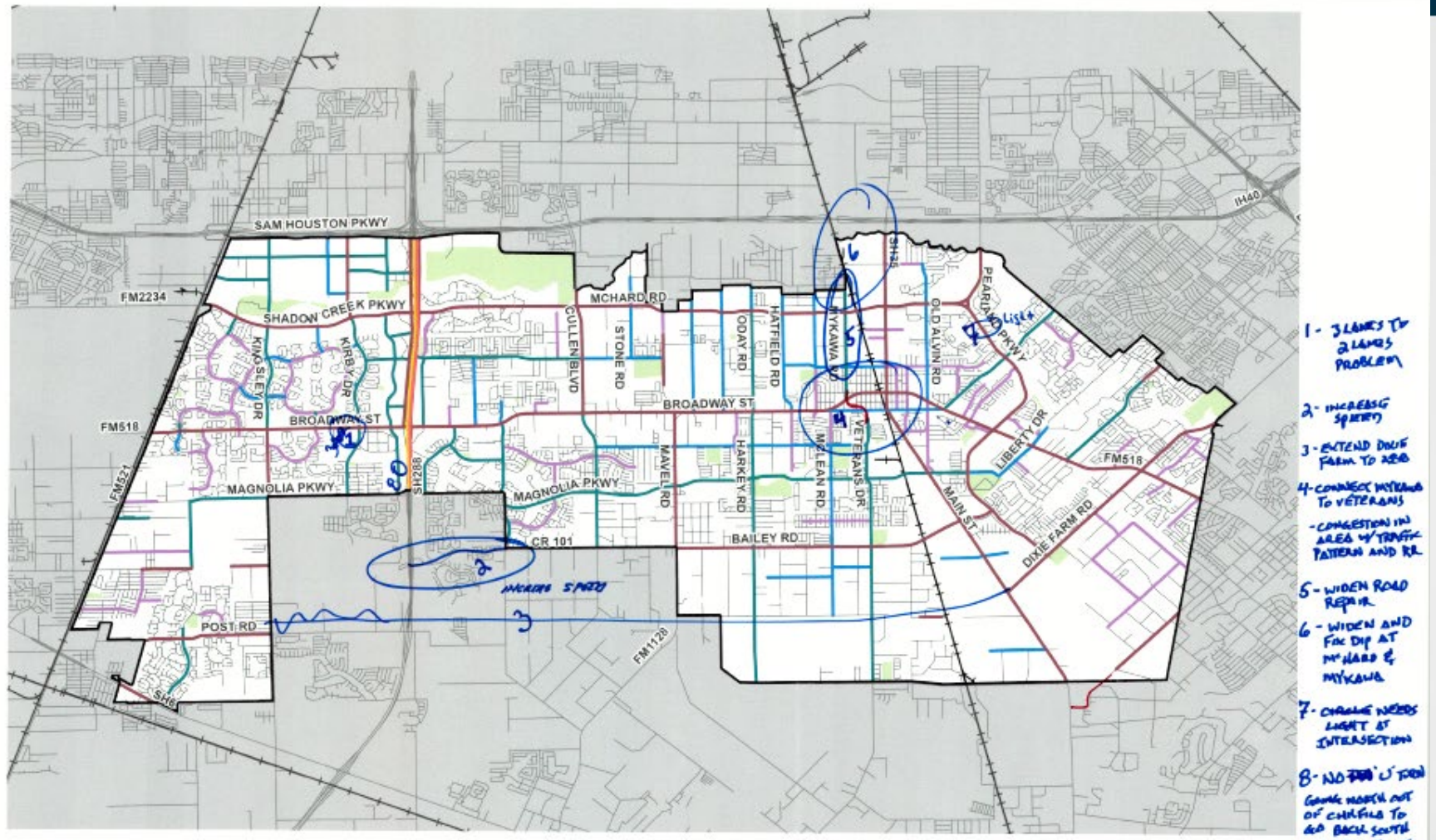
This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: May 2024
CITY OF PEARLAND

Houston-Galveston Area Council

Existing Condition Stakeholder Feedback





City of Pearland

Pearland Mobility Study Area

Kimley»Horn

Existing Road Classification

- Freeway
- Toll-Lane
- Major Thoroughfares
- Secondary Thoroughfares
- Major Collector
- Minor Collector
- City Limits
- Parks
- Railroads

N

1 inch = 1.75 miles

0 1.75 3.5

Miles

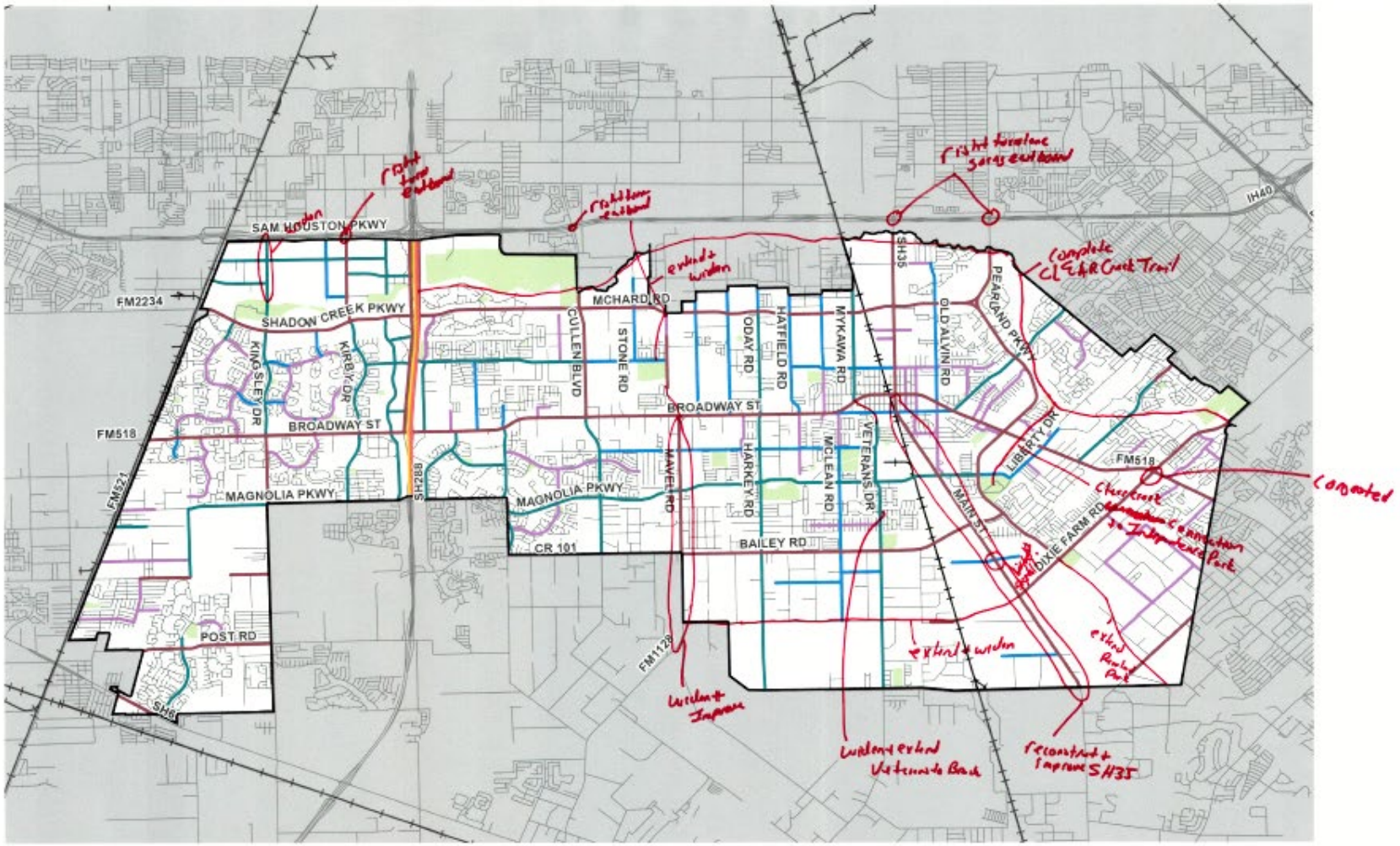
This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: MARCH 2024
CITY OF PEARLAND

Houston-Galveston Area Council

Existing Condition Stakeholder Feedback





City of Pearland

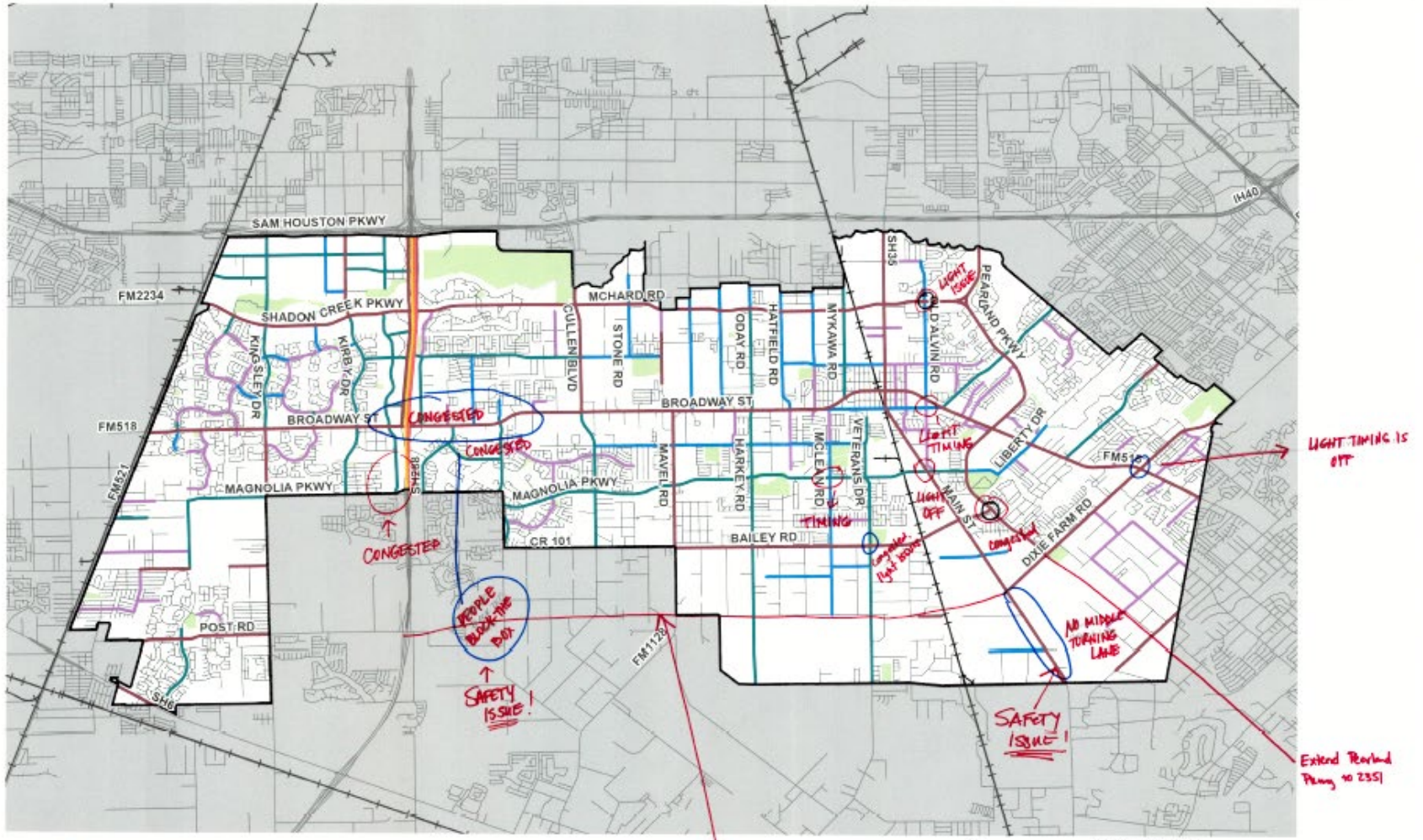
Pearland Mobility Study Area

Kimley»Horn

Houston-Galveston Area Council

Existing Condition Stakeholder Feedback

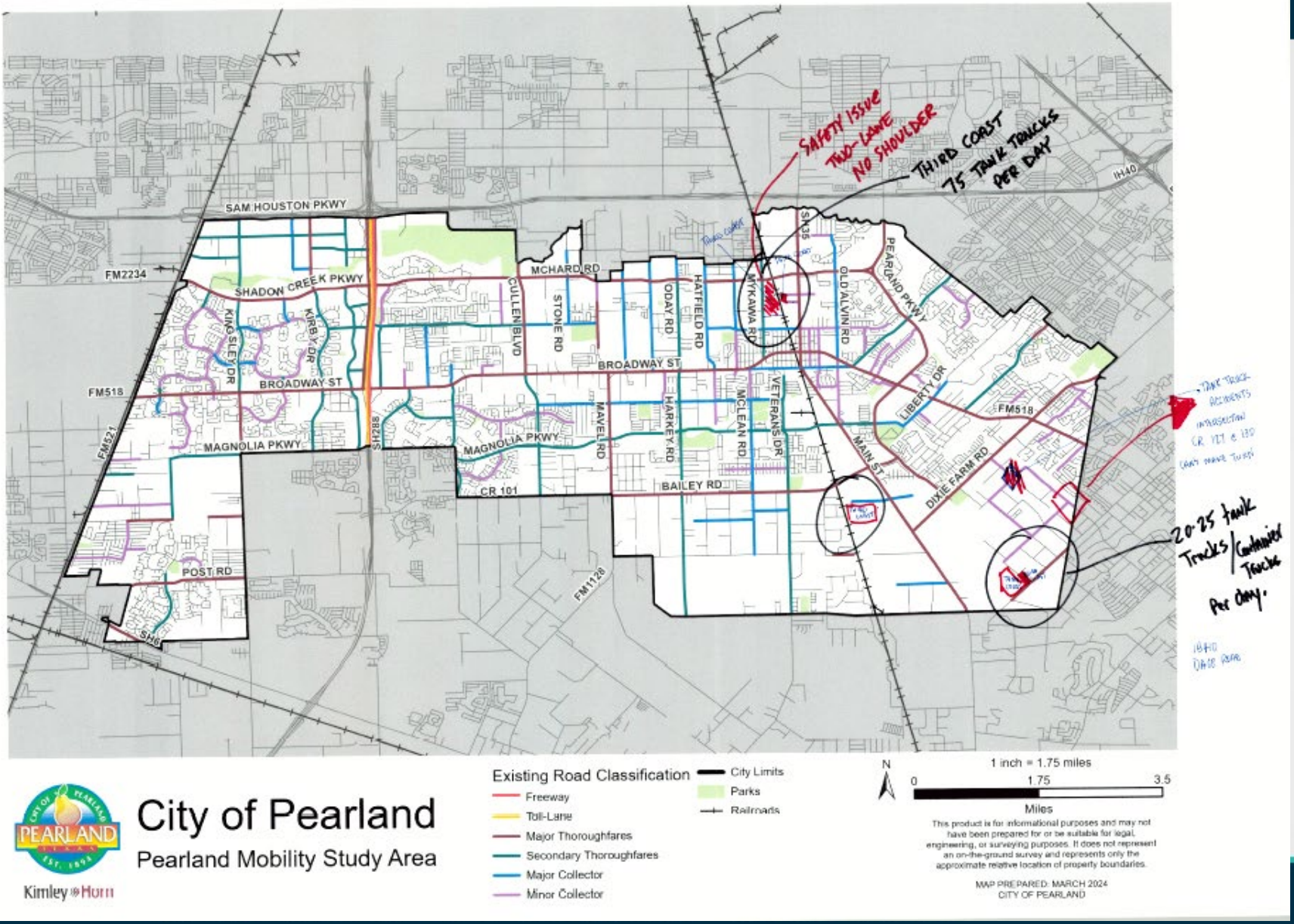




Houston-Galveston Area Council

Existing Condition Stakeholder Feedback

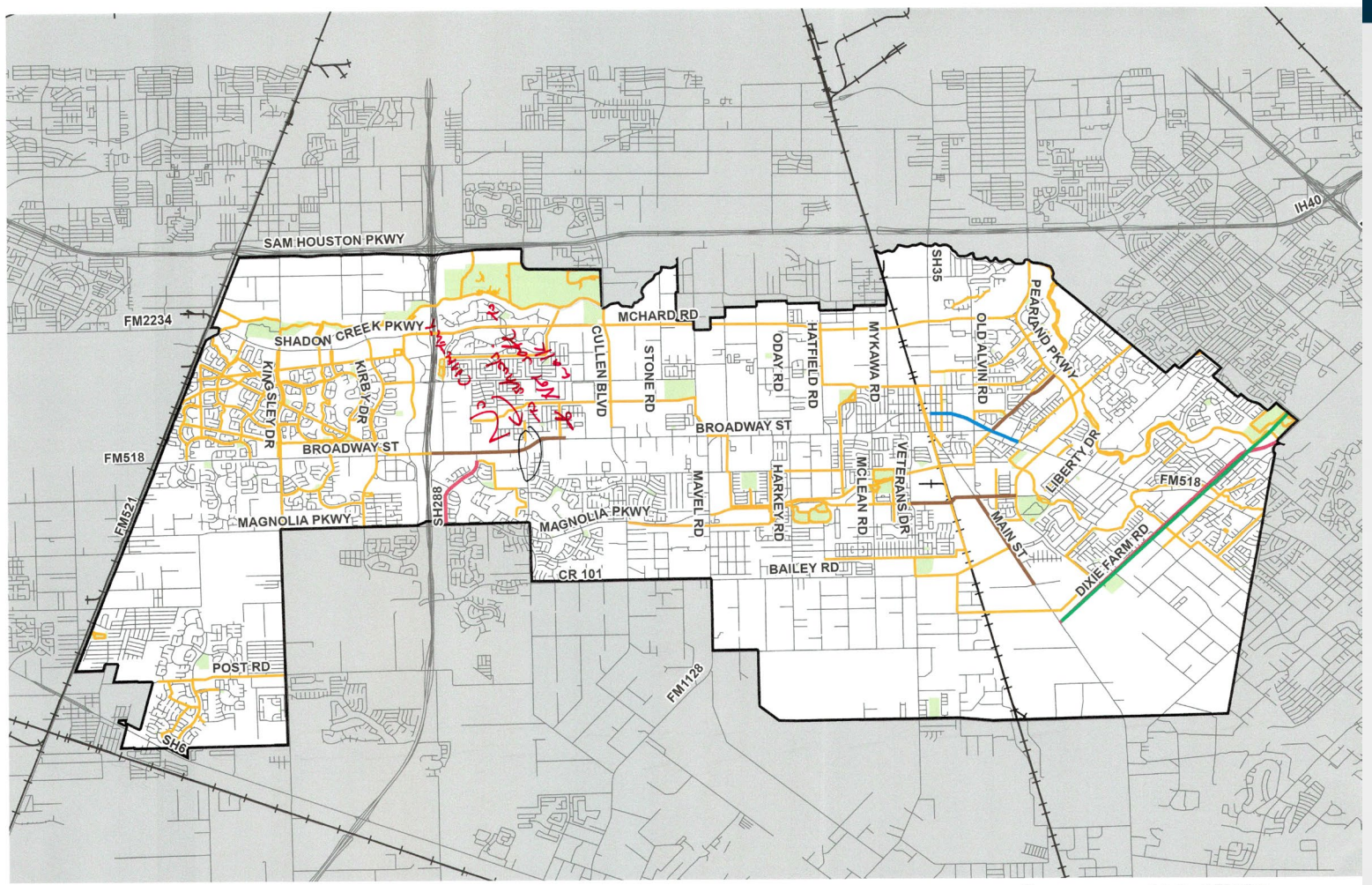




Houston-Galveston Area Council

Existing Condition Stakeholder Feedback





Houston-Galveston Area Council

Locations with Mobility Concerns



Locations with mobility issues and concerns identified by the Steering Committee or Stakeholders:

- Mykawa Road, from Shadow Creek Parkway up to Veterans Drive
  - Lack of roadway shoulder relief
  - Heavy truck traffic usage
  - Needs to be widened
- Dixie Farm Road & Bailey Road
  - Extend past the City boundary
  - Connect to the western part of the City
- Main Street / SH 35
  - Roadway Improvements, resurfacing
  - Adding middle turn-lanes
- Manvel Road – Roadway Improvements, resurfacing
- FM 518 – General Congestion *(In FM 518 Corridor Study's Study Area)*

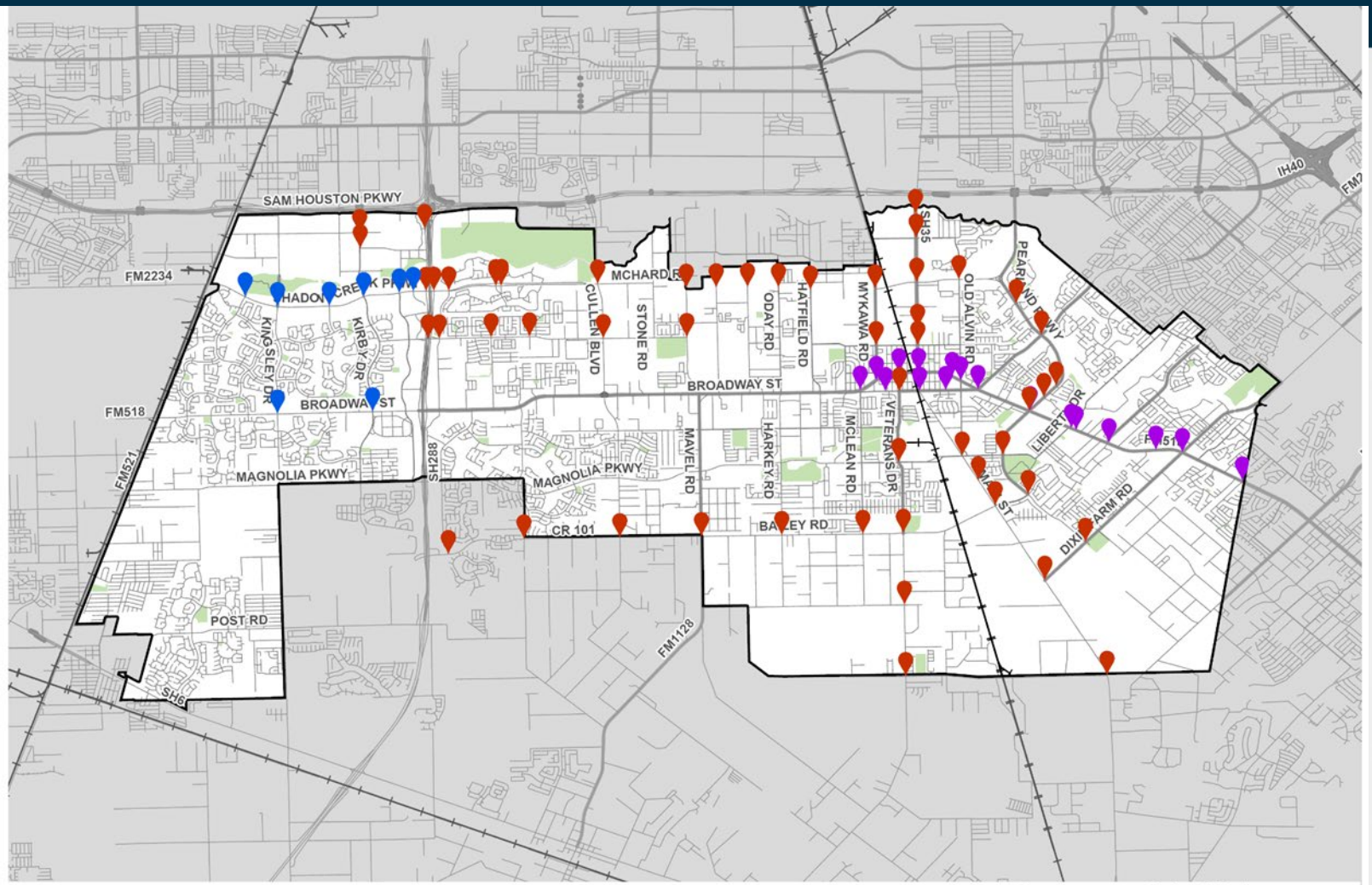
Existing Conditions: Signal Operations Analysis



- **Synchro model used to analyze AM and PM peak signal operations**
- **Analyzed approximately 60 signalized intersections along 7 corridors**
  - SH 35 (Flea Market – Hastings Cannon Road)
  - Pearland Parkway (Forest Park Ln – Dixie Farm Road)
  - Bailey Ave (Smith Ranch Road – Pearland Pkwy)
  - McHard Road (SH 288 – Old Alvin Road)
  - Veterans Dr (Walnut St – Hastings Cannon Road)
  - Hughes Ranch Road (SH 288 – Reid Blvd)
  - Kirby Dr (N Spectrum – S Spectrum)
  - Orange at Mykawa

Existing Conditions – Traffic Count Locations





City of Pearland

Pearland Mobility Study

Traffic Count Locations

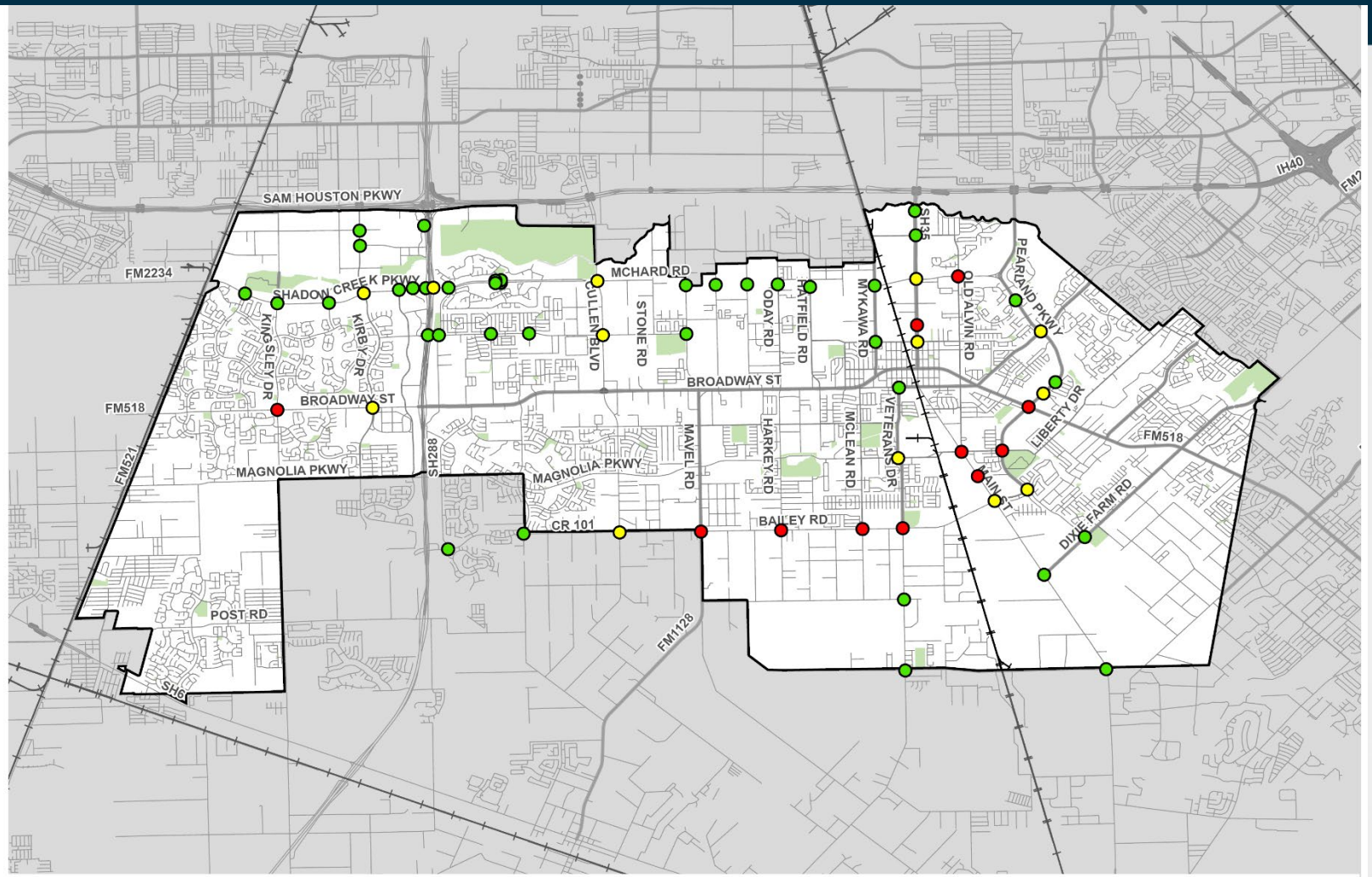
- Pearland Mobility Study
- Other Study Locations
- FM 518 Count Locations

Kimley»Horn

Houston-Galveston Area Council

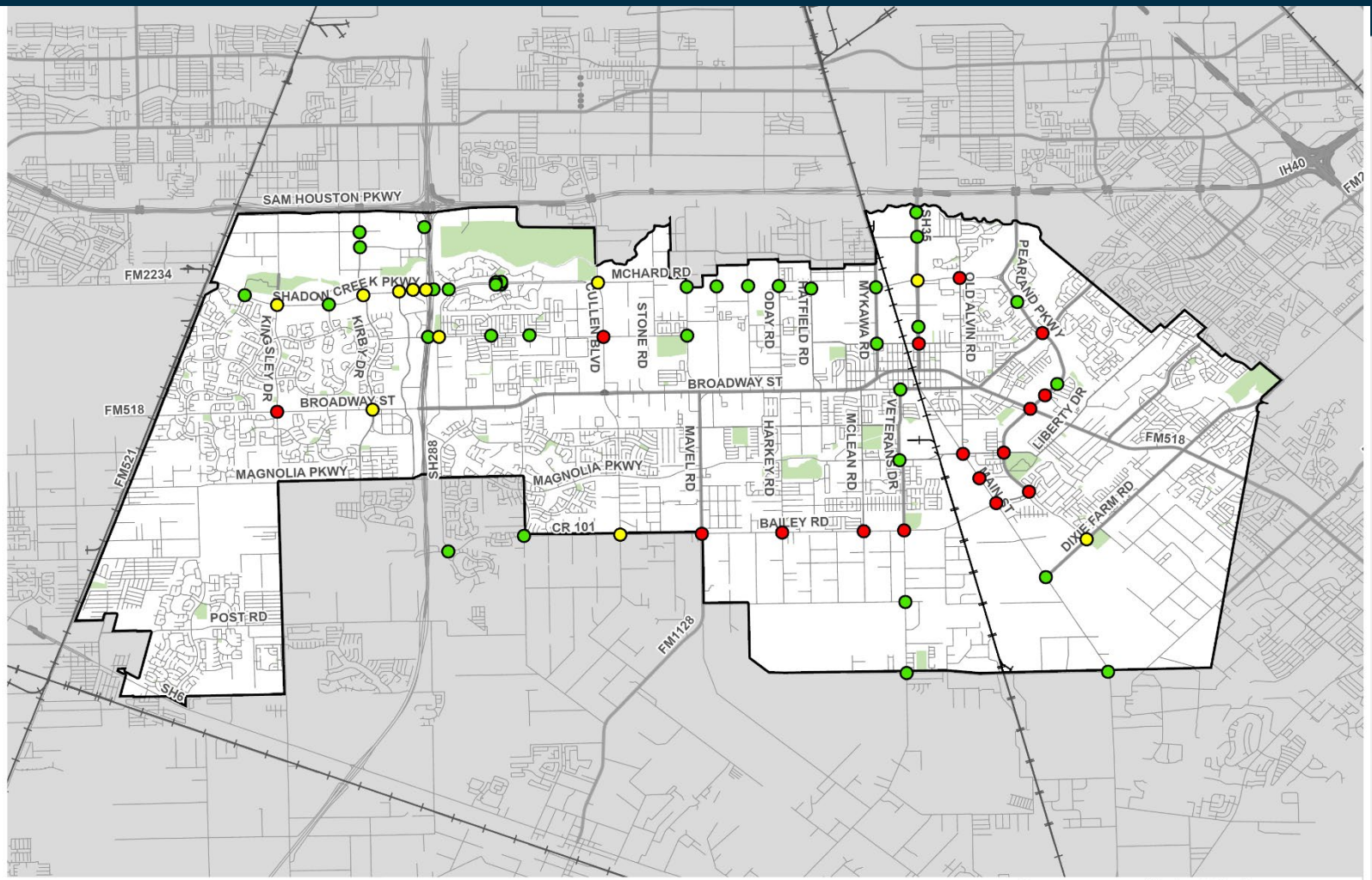
Existing Level of Service (LOS) Maps – AM Peak Hours





Existing Level of Service (LOS) Maps – PM Peak Hours





City of Pearland

Pearland Mobility Study

Kimley»Horn

Intersection LOS - PM Peak

- A-C
- D
- E-F

N

1 inch = 1.75 miles

0 1.75 3.5

Miles

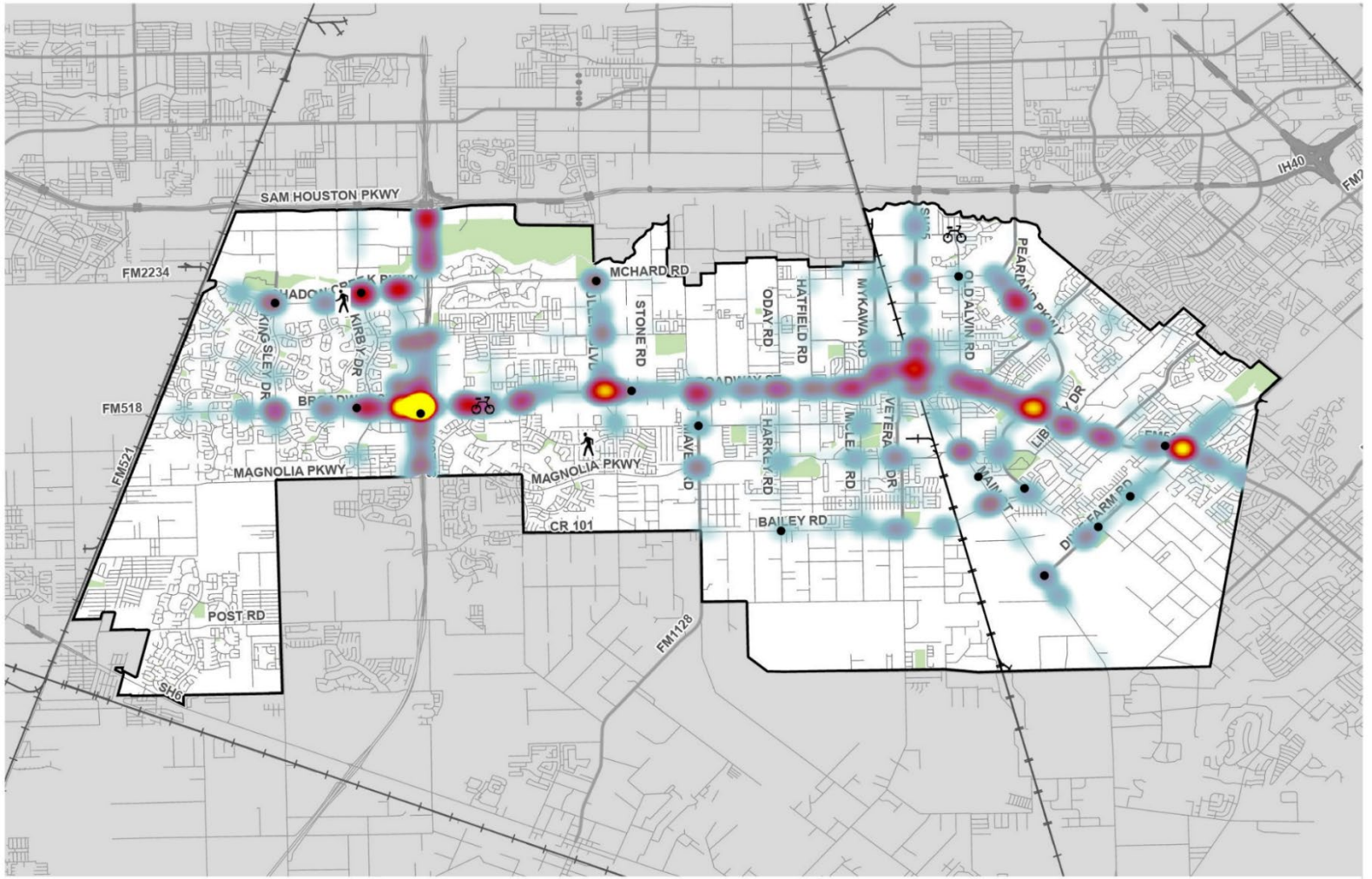
This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: May 2024
CITY OF PEARLAND

Houston-Galveston Area Council

Crash Heat Map (2017-2023)





City of Pearland

Pearland Mobility Study

Kimley»Horn

Crash Heat Map

TxDOT CRIS Data: 2017 - 2023

Fewer Crashes

More Crashes

Vehicular Passenger Fatalities

Bicyclist Fatalities

Pedestrian Fatalities

N

1 inch = 1.75 miles

0 1.75 3.5

Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: May 2024
CITY OF PEARLAND

Houston-Galveston Area Council

Existing Conditions Crash Data Summary



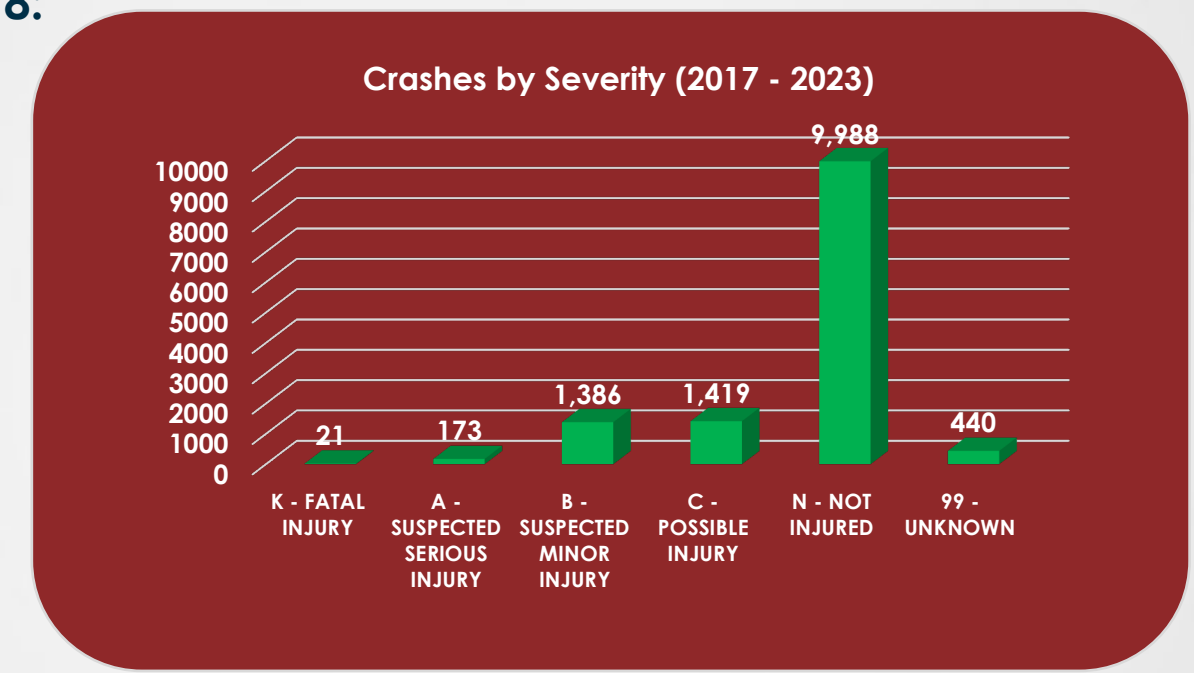
Of the 13,427 total crashes reported, 38% (5,167) of crashes happened at the intersection or were intersection-related.
Most intersection-related crashes were clustered around the following intersections along Broadway Street / FM 518:

- SH 288 (494)
- Cullen Boulevard (149)
- SH 35/Main Street (67)
- Pearland Parkway (119)
- Dixie Farm Road (98)

91 Crashes involved bicyclists

100 Crashes involved pedestrians

*Includes all crash severities



Crashes with unknown severity were related to vehicle crashes with another parked car or fixed object.

Public Engagement Summary



1. 1st Steering Committee Meeting (January 23rd)
2. 1st Stakeholder Meeting (March 18th)
3. Pearland Spring Fest (April 6th)
4. Online Engagement (April 1st – April 26th)



The photo to the left was taken at the 1st Stakeholder Meeting.



This flyer, in English and Spanish version, was used to spread the word about the projects and upcoming Spring Fest.

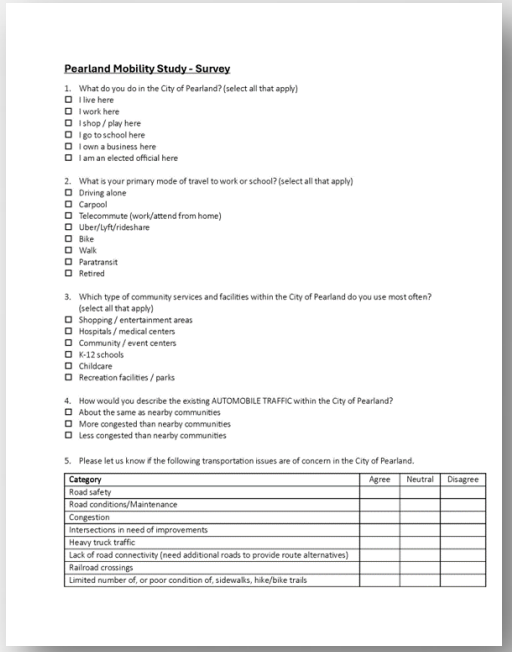
Engagement Content



Project survey and budget prioritization activity – In-person at the Pearland Spring Fest and Online via Engage.H-GAC.com



The Budget Prioritization Activity was first introduced to the Stakeholder Group



Pearland Mobility Study - Survey

1. What do you do in the City of Pearland? (select all that apply)
- ☐ I live here
- ☐ I work here
- ☐ I shop / play here
- ☐ I go to school here
- ☐ I own a business here
- ☐ I am an elected official here

2. What is your primary mode of travel to work or school? (select all that apply)
- ☐ Driving alone
- ☐ Carpool
- ☐ Telecommute (work/attend from home)
- ☐ Uber/Lyft/rideshare
- ☐ Bike
- ☐ Walk
- ☐ Paratransit
- ☐ Retired

3. Which type of community services and facilities within the City of Pearland do you use most often? (select all that apply)
- ☐ Shopping / entertainment areas
- ☐ Hospitals / medical centers
- ☐ Community / event centers
- ☐ K-12 schools
- ☐ Childcare
- ☐ Recreation facilities / parks

4. How would you describe the existing AUTOMOBILE TRAFFIC within the City of Pearland?
- ☐ About the same as nearby communities
- ☐ More congested than nearby communities
- ☐ Less congested than nearby communities

5. Please let us know if the following transportation issues are of concern in the City of Pearland.

Category	Agree	Neutral	Disagree
Road safety			
Road conditions/Maintenance			
Congestion			
Intersections in need of improvements			
Heavy truck traffic			
Lack of road connectivity (need additional roads to provide route alternatives)			
Railroad crossings			
Limited number of, or poor condition of, sidewalks, hike/bike trails			

A joint project (Pearland Mobility Study and FM 518 Corridor Study introductory survey was used to gather feedback on transportation-related issues within Pearland.

Pearland Spring Fest (April 6th, 2024)





- This annual family-friendly event in Independence Park
- The project team shared a booth with FM 518 Corridor's Project Team
- Engagement activities included:
  - Budget Prioritization Activity
  - QR link for the online survey
  - Spin the wheel to win a prize

Snapshots from the Event!













Public Engagement Summary



225
Survey Responses

740
Total Website Visits

163 Budget Prioritization Participants

Survey Results

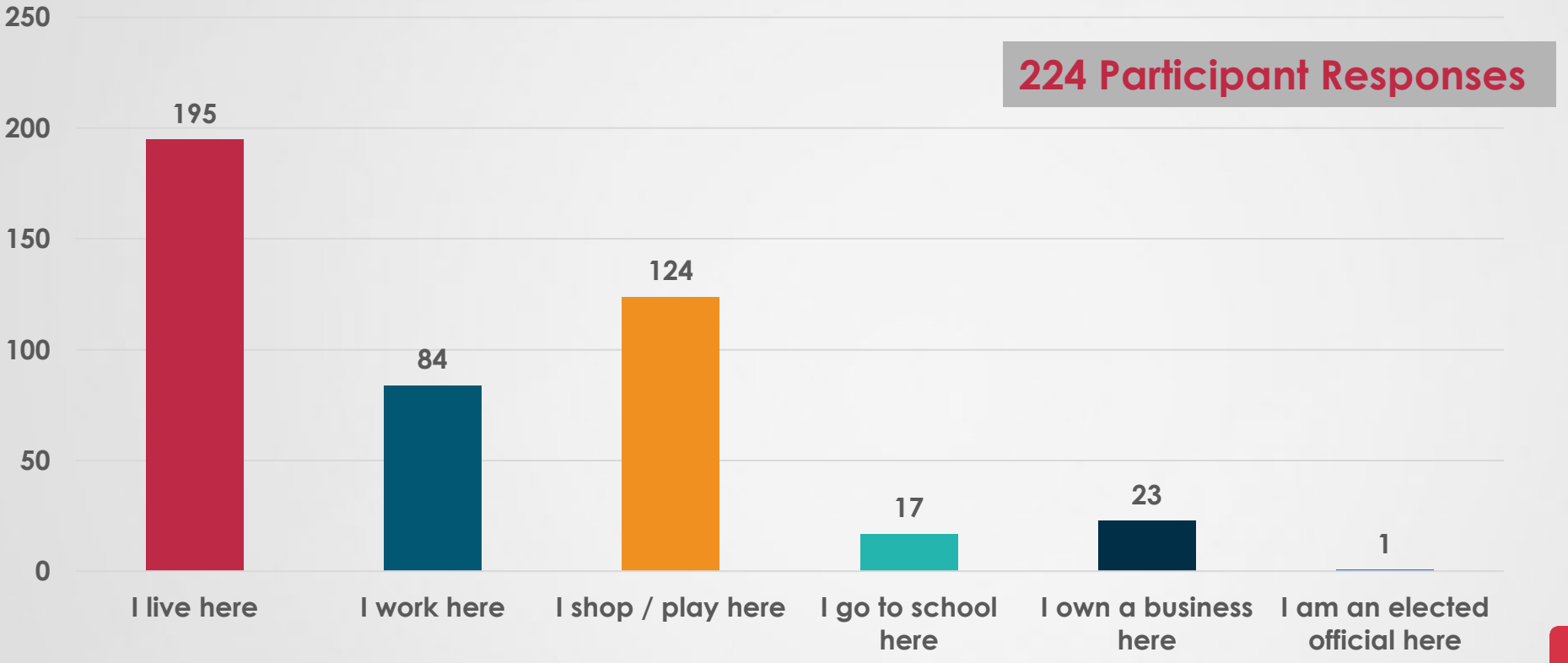
Includes: Spring Fest, Online Feedback, Stakeholder Meeting



What do you do in Pearland?

***Respondents could select multiple options for this question

224 Participant Responses



Survey Results

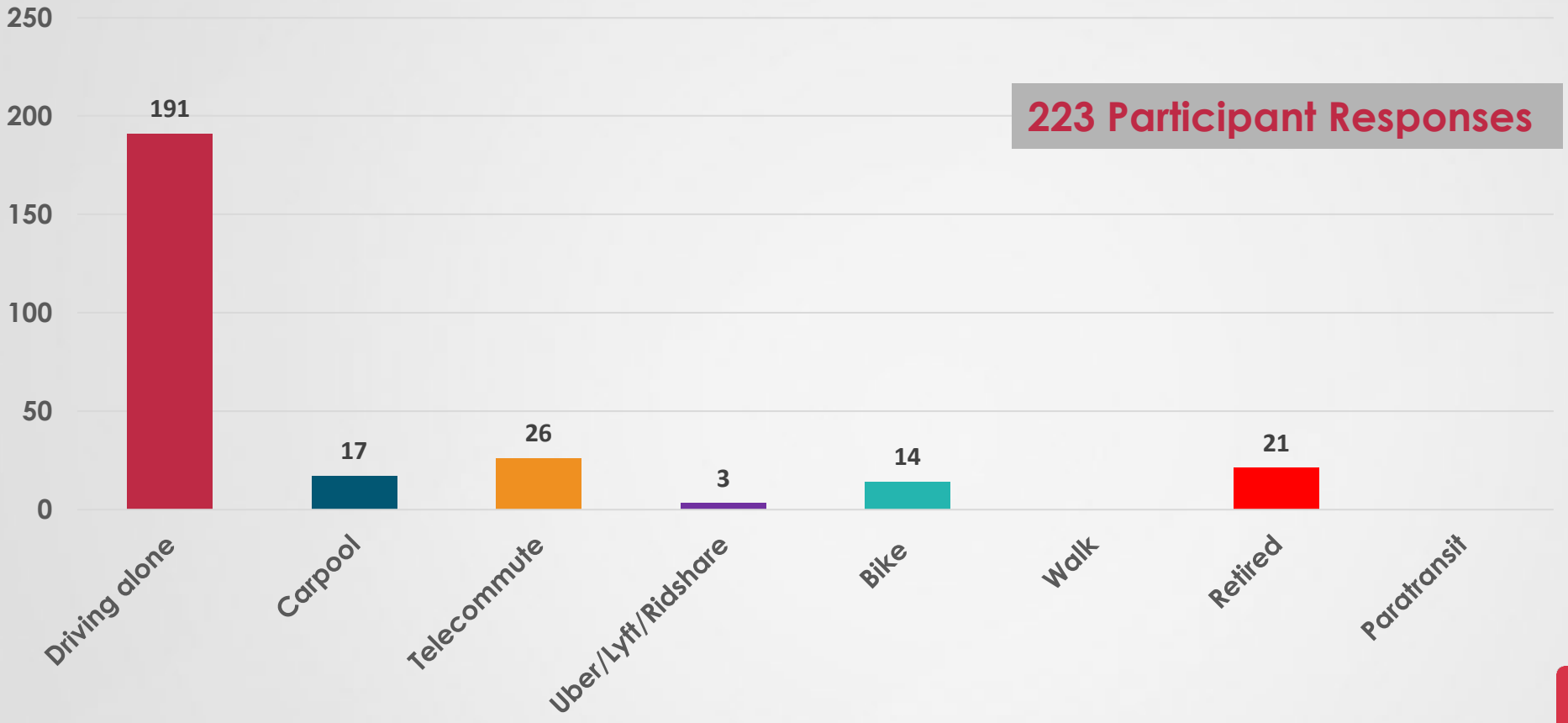
Includes: Spring Fest, Online Feedback, Stakeholder Meeting



What is your primary mode of travel to work or school?

***Respondents could select multiple options for this question

223 Participant Responses



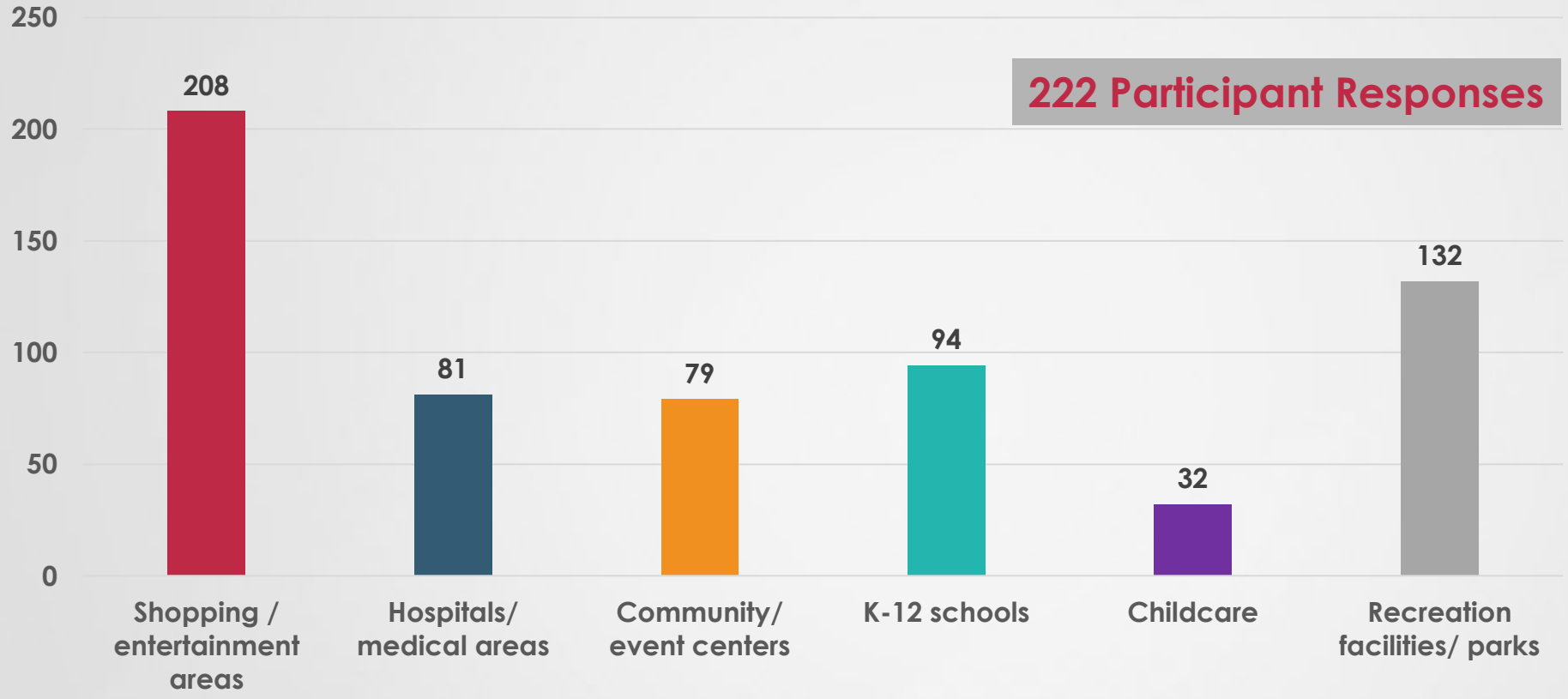
Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



Which type of community services and facilities within the City of Pearland do you use most often?

***Respondents could select multiple options for this question

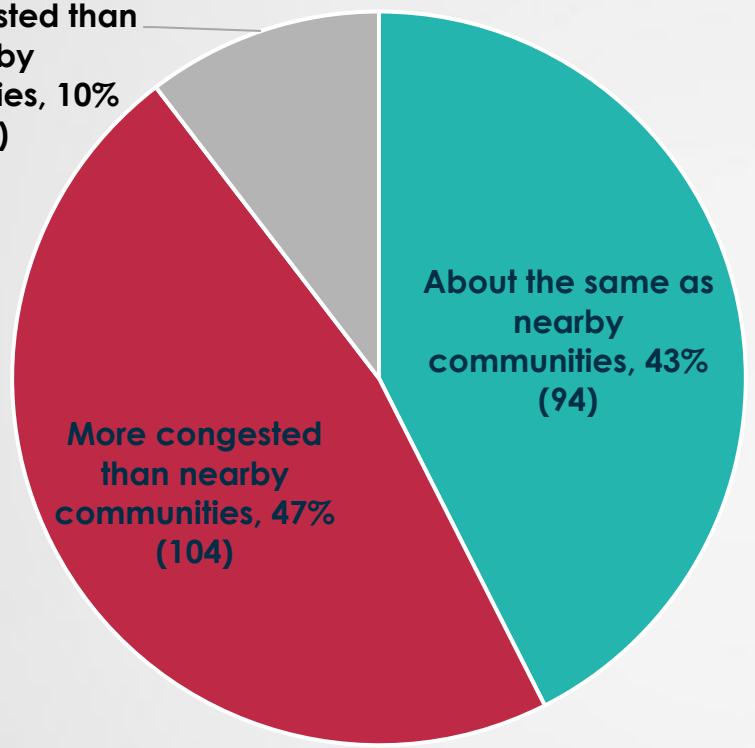


Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



How would you describe the existing AUTOMOBILE TRAFFIC within the City of Pearland?



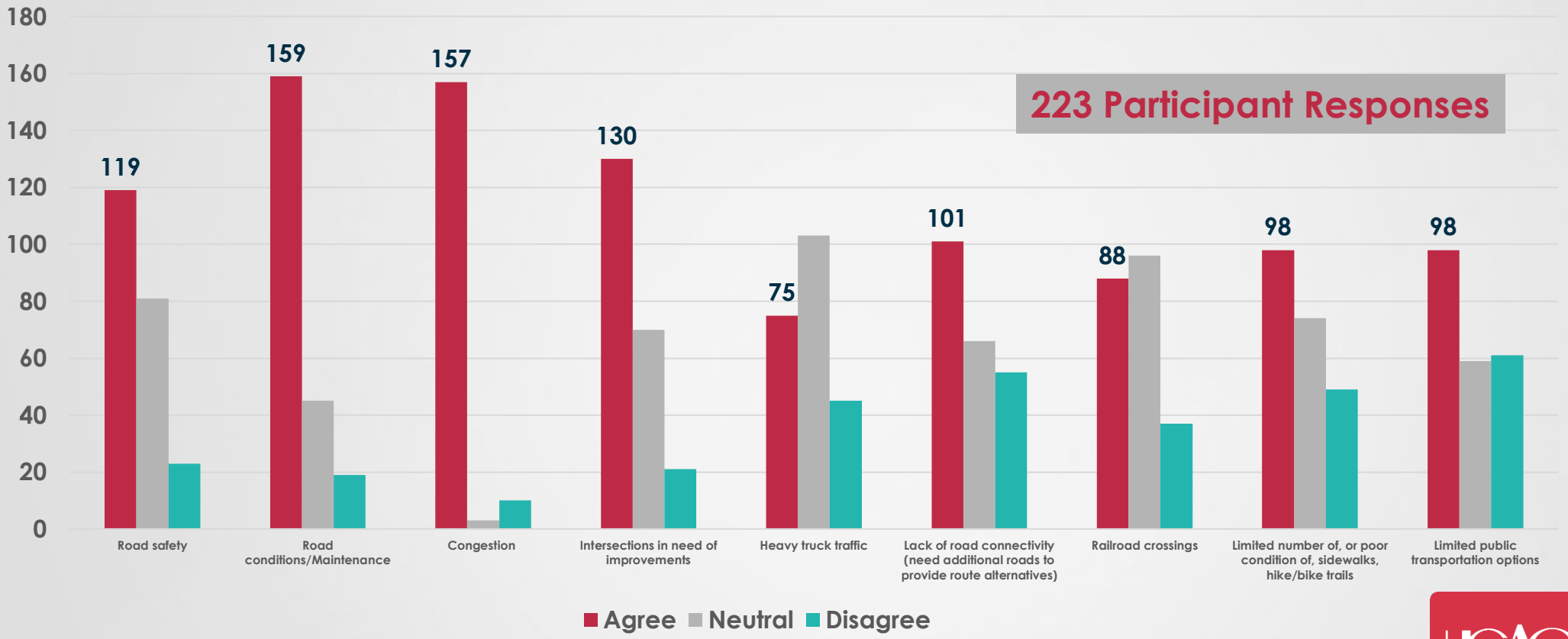
221 Participant Responses

Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



Please let us know if the following transportation issues are of concern in the City of Pearland?

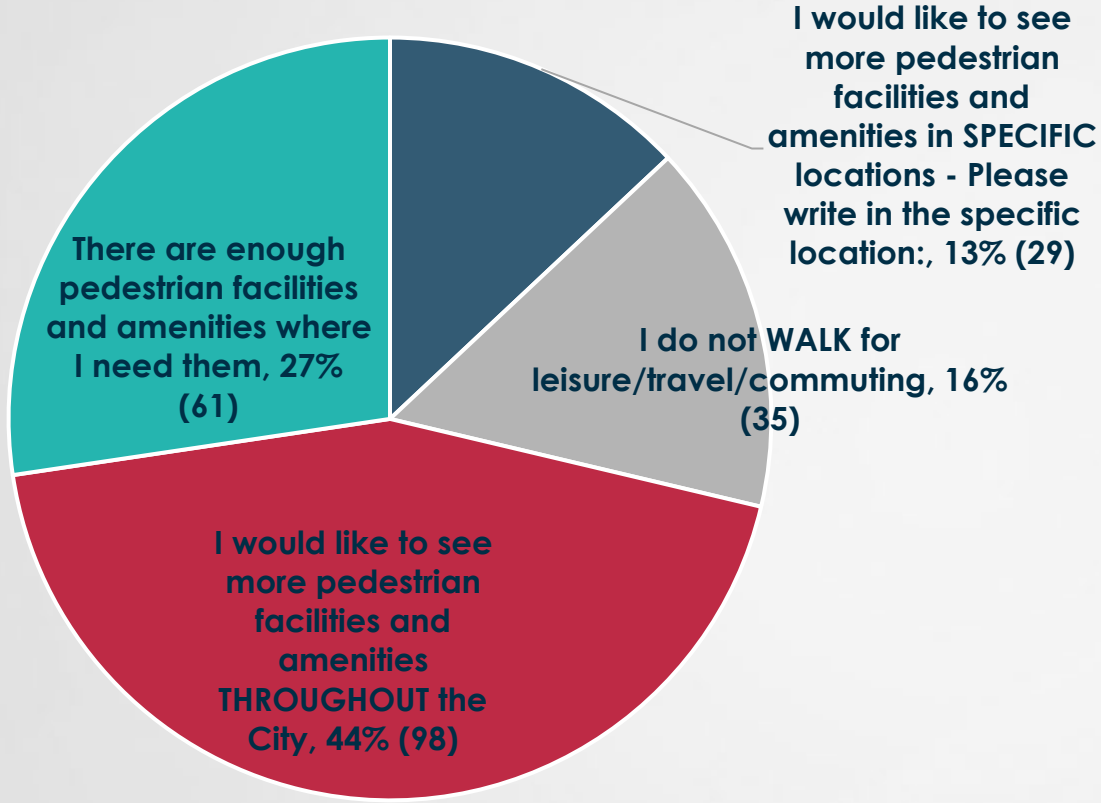


Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



How would you describe the existing PEDESTRIAN facilities and amenities (sidewalks / trails, curb ramps, lighting, benches, shade trees, crosswalks, pedestrian islands, audio assisted crossings, push buttons,etc)?



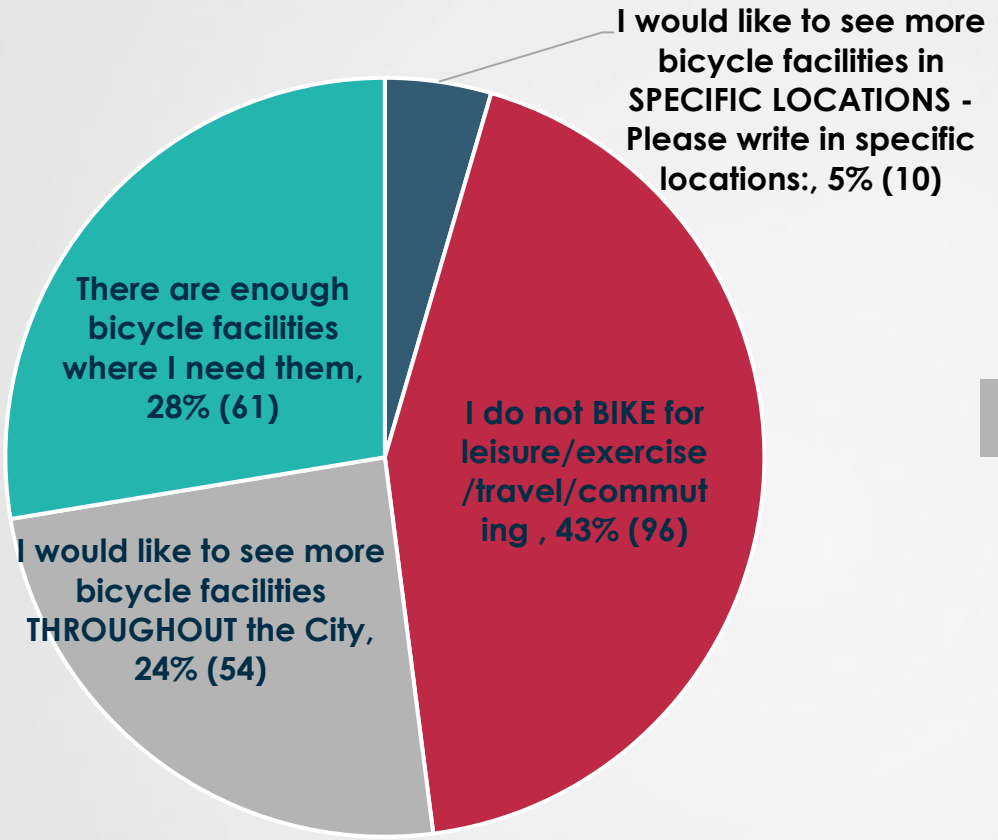
223 Participant Responses

Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



How would you describe the existing BICYCLE facilities (bike lanes, shared-use paths, safety measures, bike parking, etc.)?



221 Participant Responses

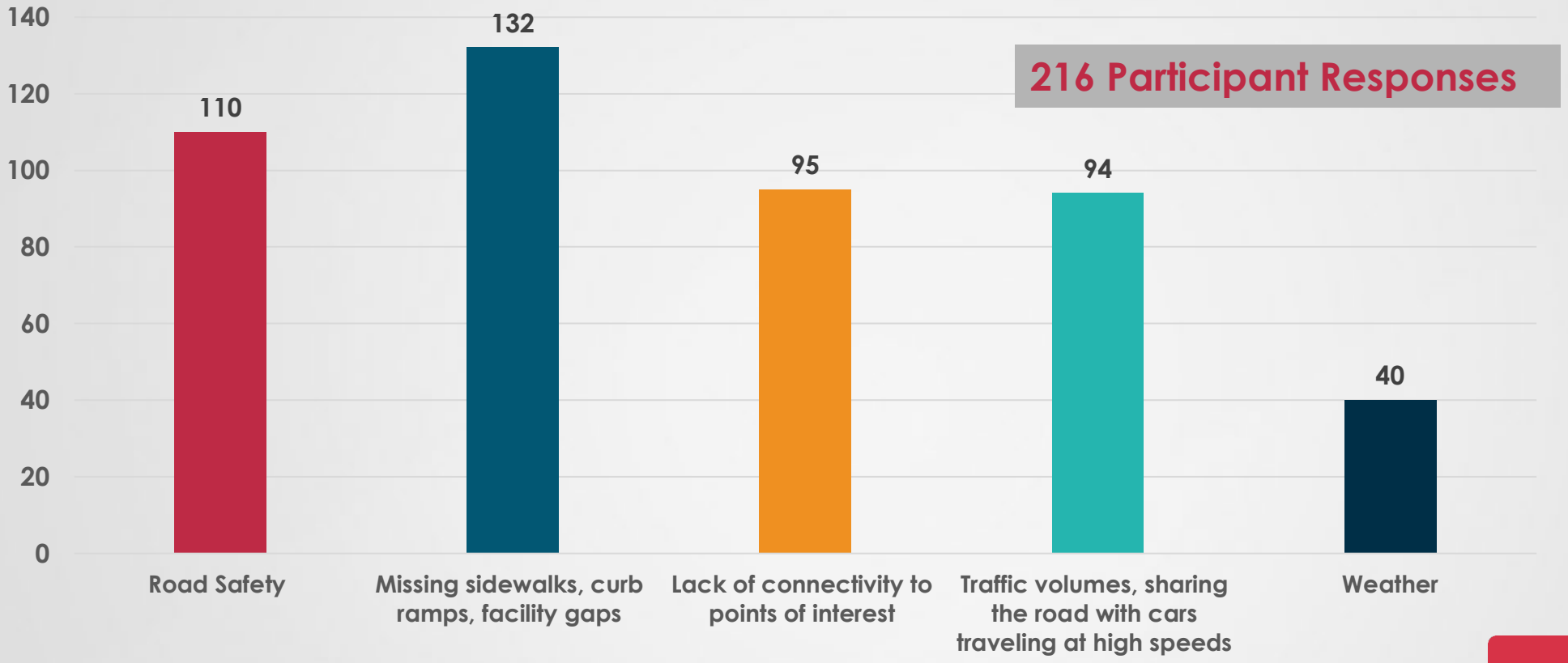
Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



What is the main barrier to walking or biking in Pearland?

***Respondents could select multiple options for this question

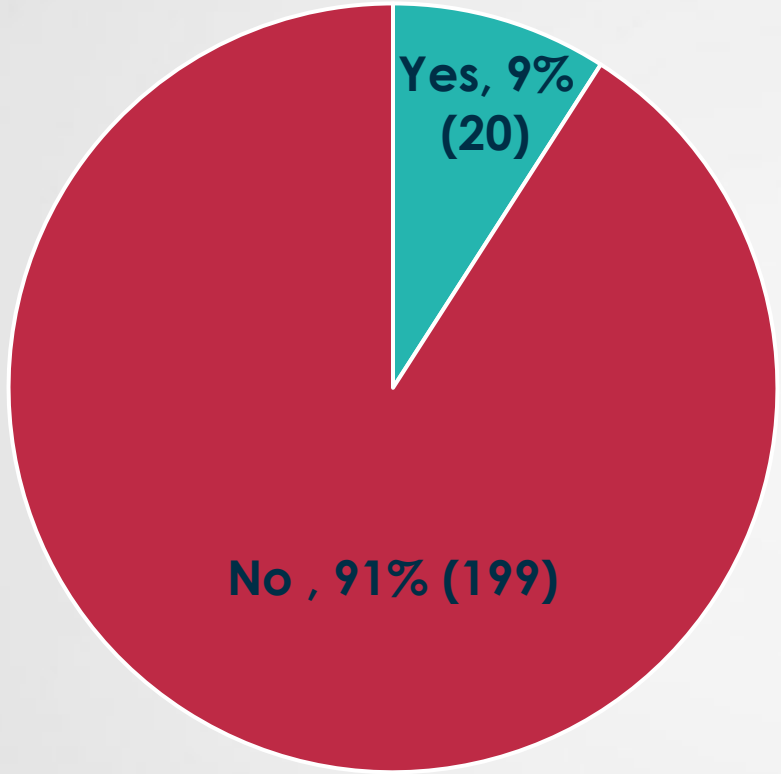


Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



Do you (or your family members) use mobility aids (wheelchairs, walking frames, electric scooters, etc.) to travel around the local area?



219 Participant Responses

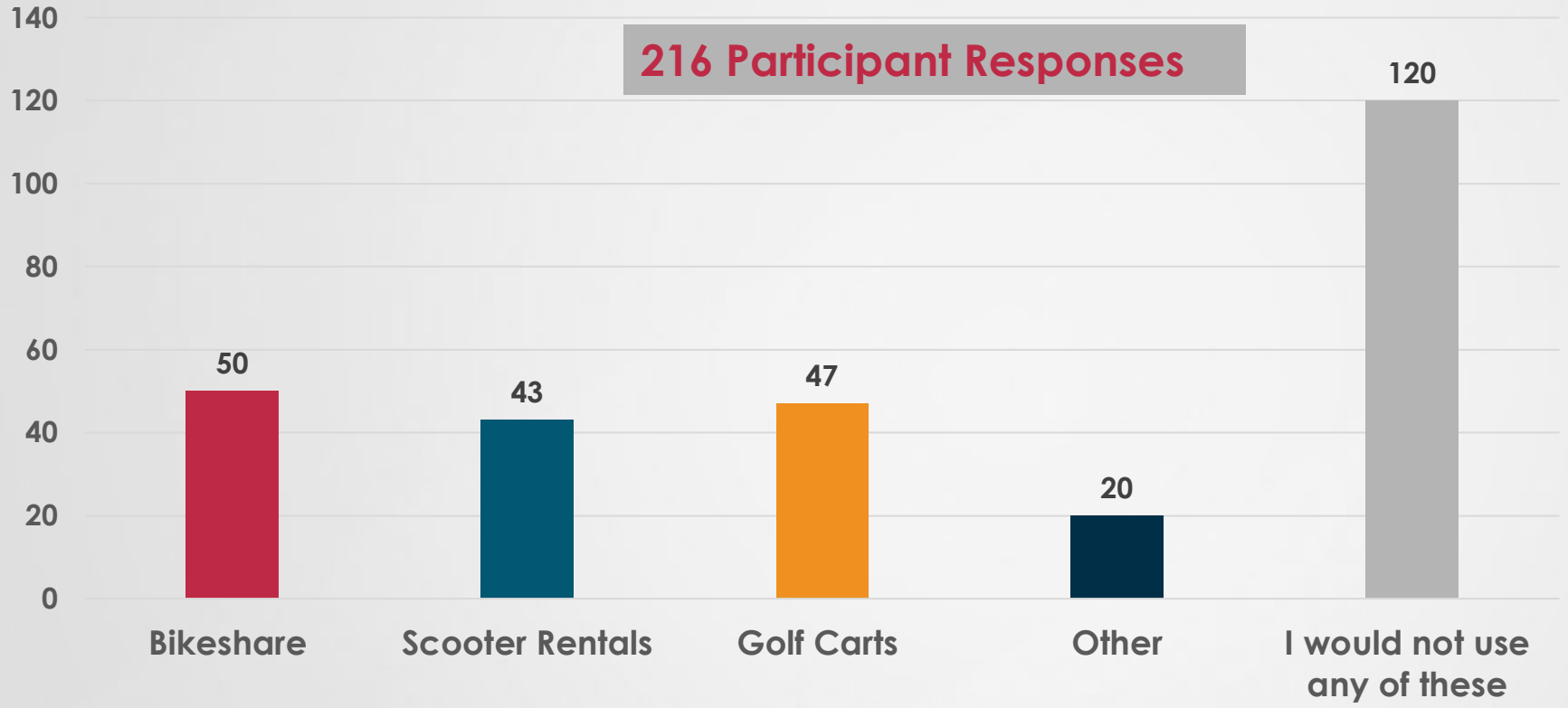
Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



If the following MICROMOBILITY options were made available in the City of Pearland, which ones would you use?

***Respondents could select multiple options for this question

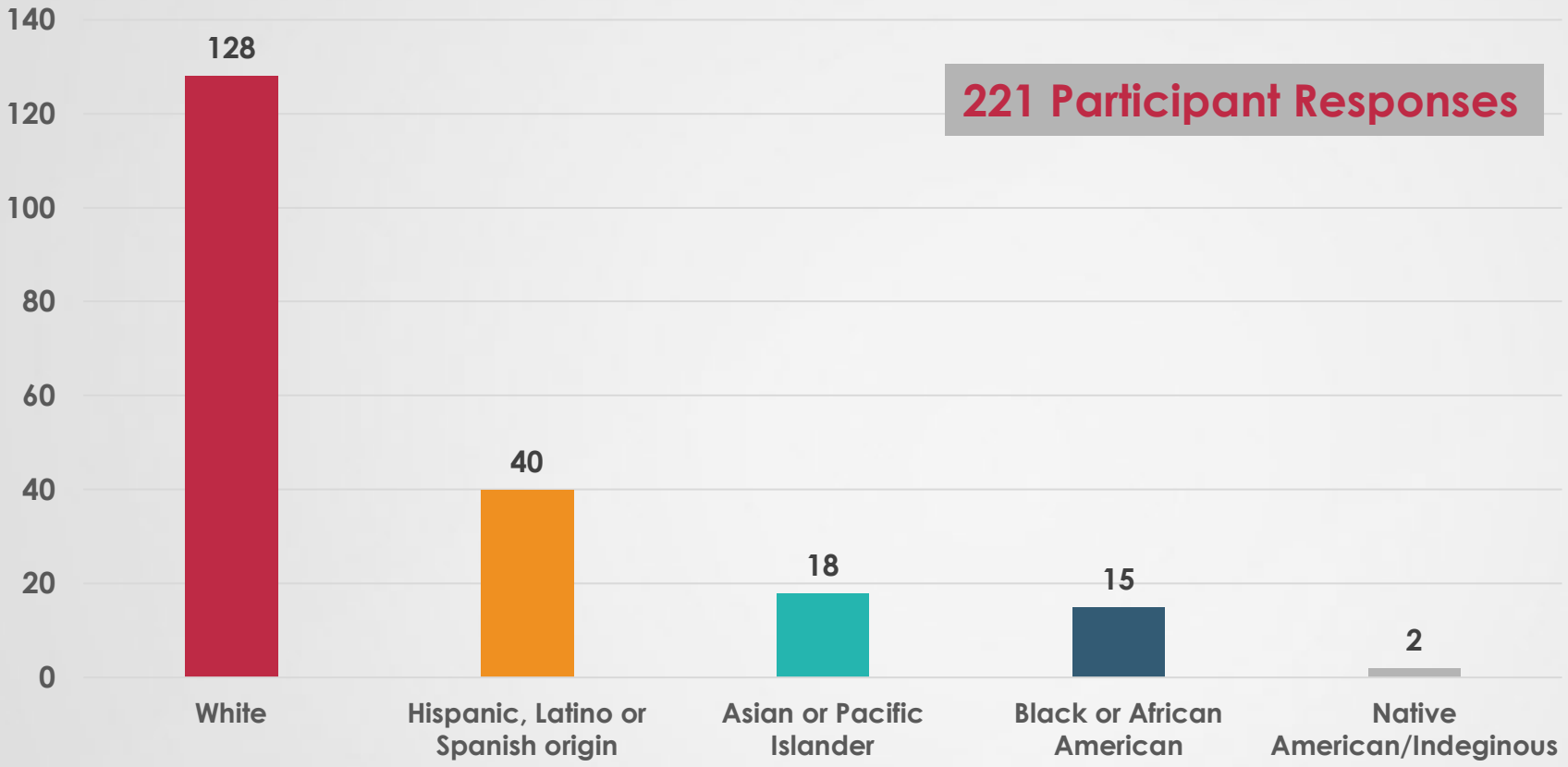


Survey Participant Demographics



Racial Breakdown

***Respondents could select multiple options for this question

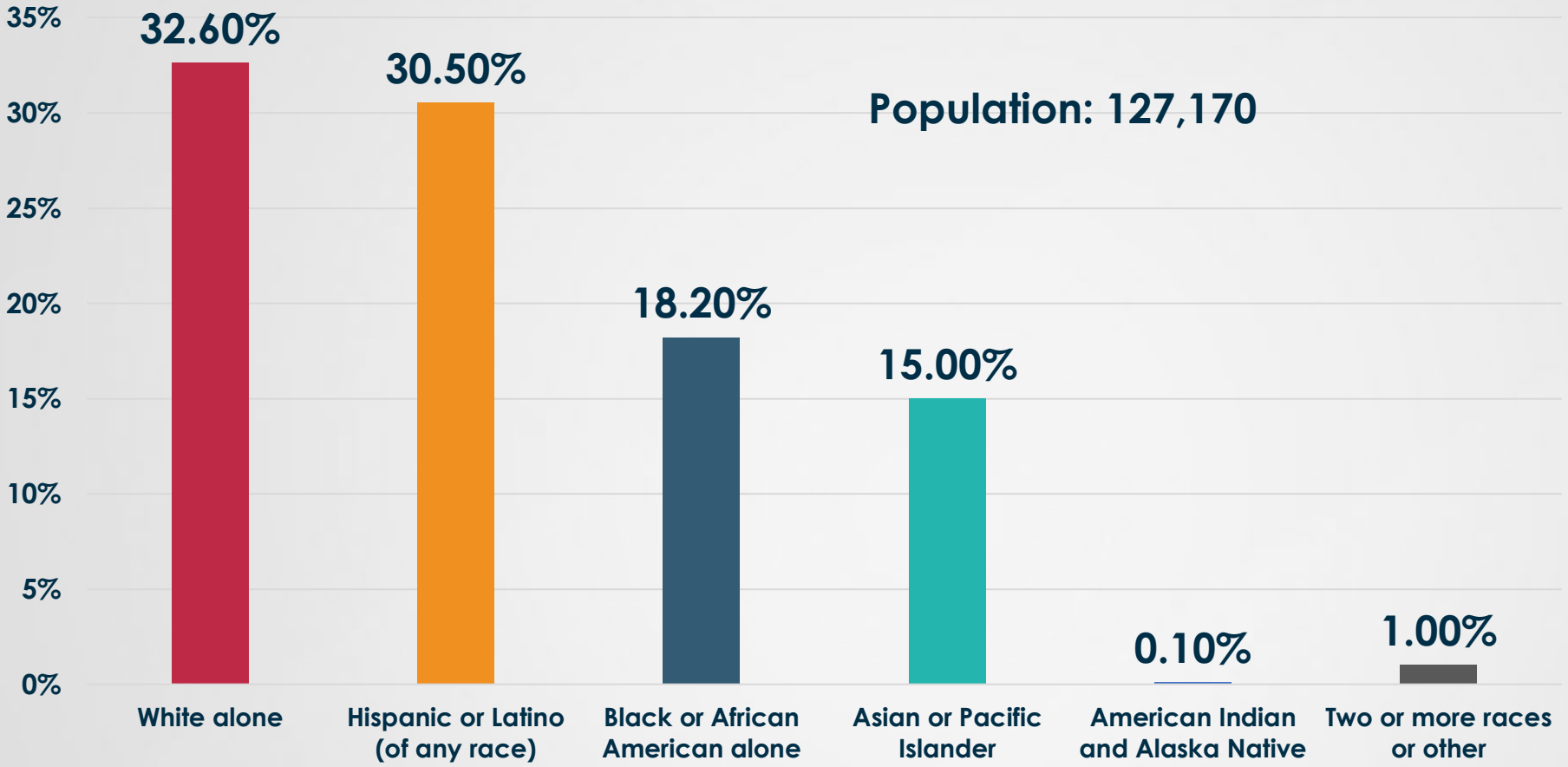


221 Participant Responses

Survey Participant Demographics



Racial Breakdown of Pearland Residents

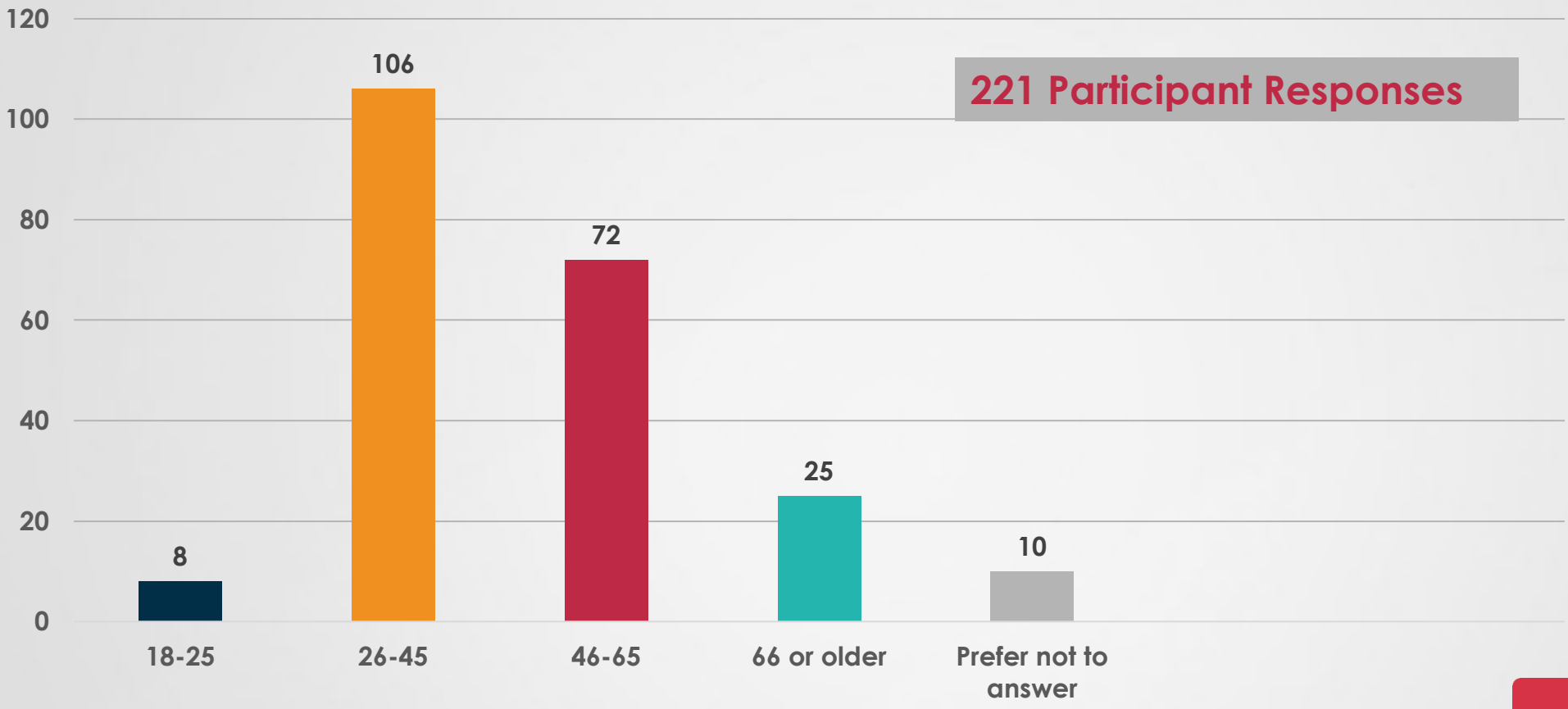


Source: U.S. Census Bureau. "ACS Demographic and Housing Estimates." American Community Survey, ACS 5-Year Estimates Data Profiles, Table DP05, 2022

Survey Participant Demographics



Age Distribution



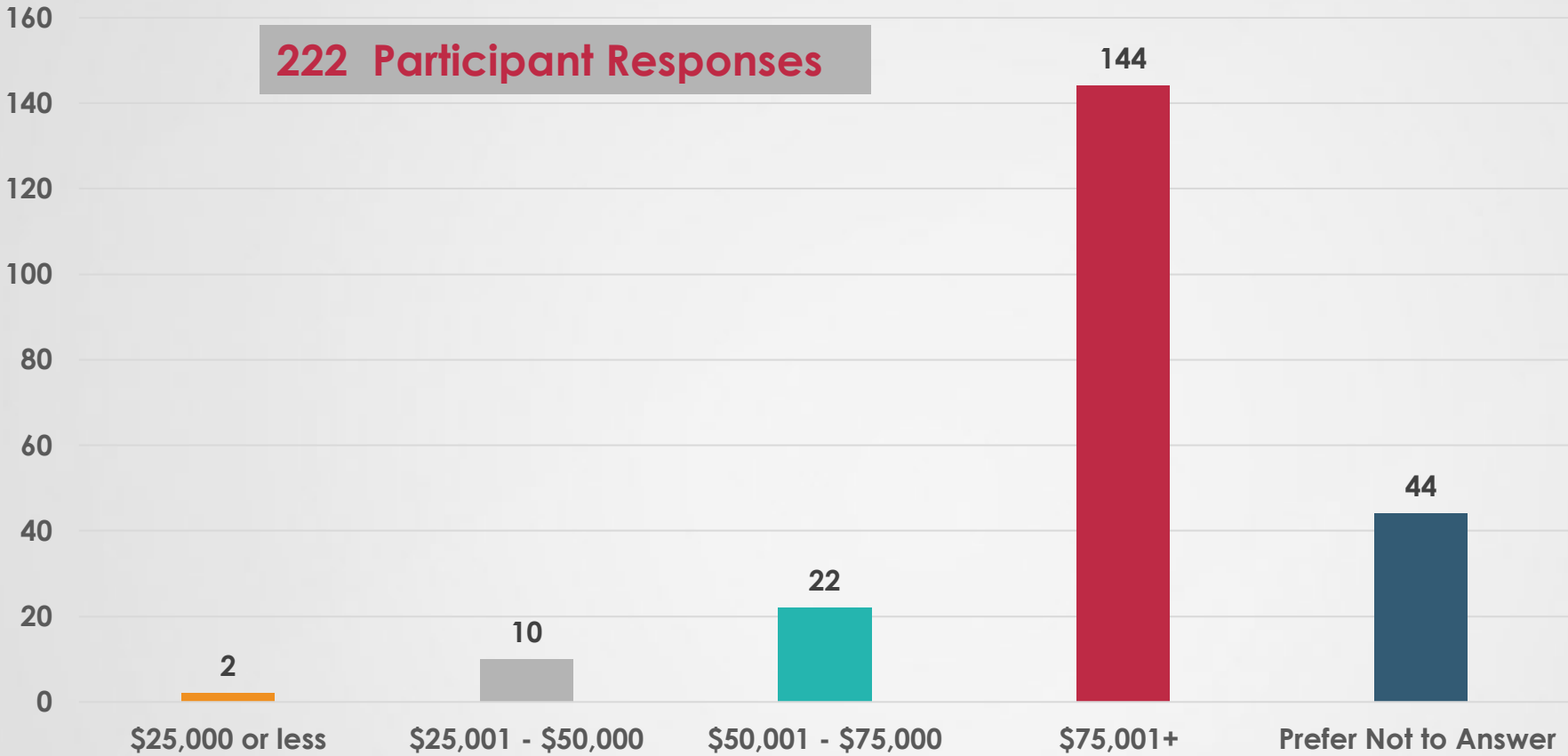
221 Participant Responses

Survey Participant Demographics



Annual Income

222 Participant Responses

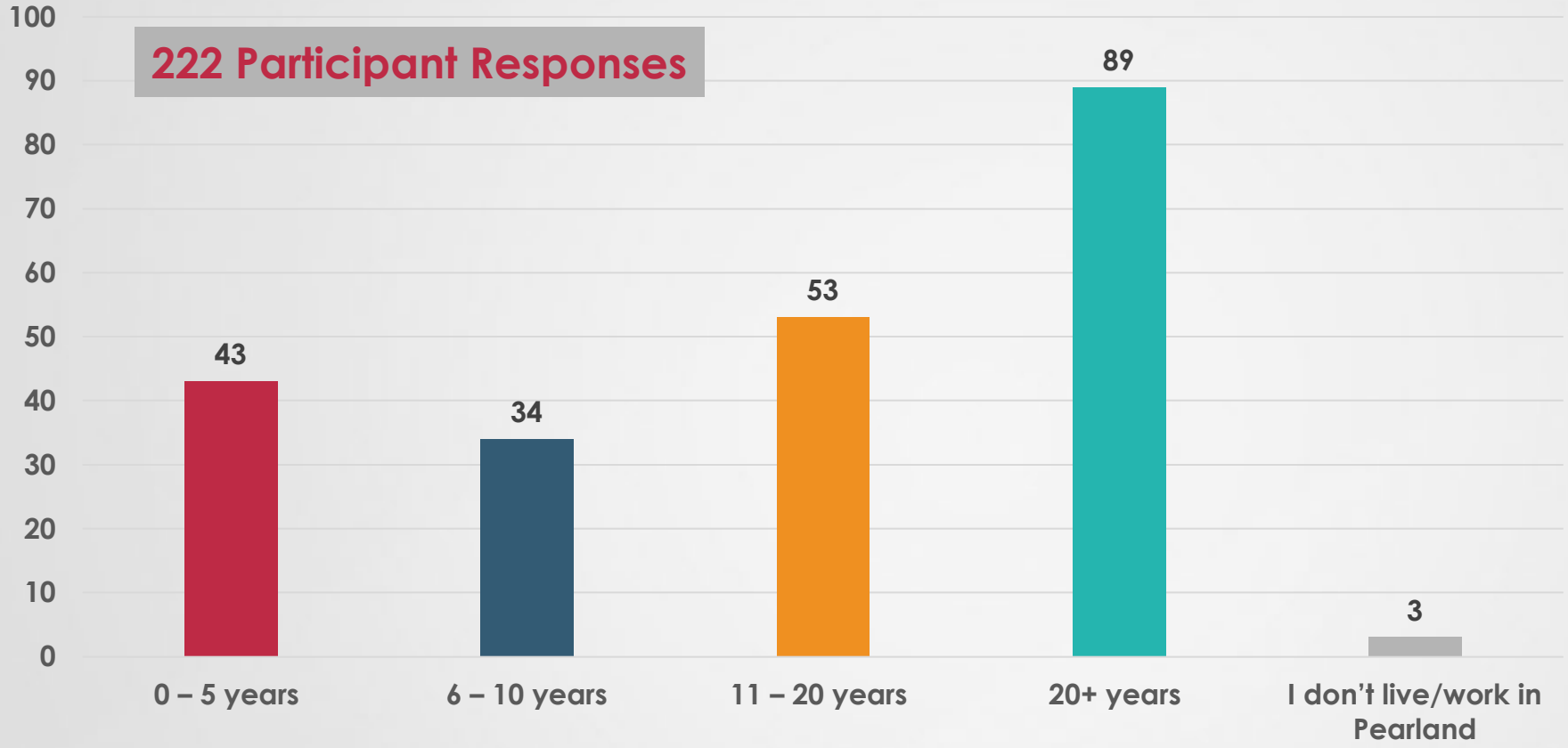


Survey Participant Demographics



How long have you lived or worked in Pearland, if applicable?

***Respondents could select multiple options for this question



Budget Prioritization Activity



Budget Prioritization Activity

TRAFFIC SAFETY



Includes measures like street lights, stop signs, audio-assisted crossings, pavement striping, intersection safety treatments.

PEDESTRIAN FACILITIES



Includes measures like putting in new sidewalks / trails, ADA compliant curb ramps, lighting along pedestrian paths, benches.

BICYCLE FACILITIES



Includes measures like putting in new bike lanes, shared use paths, improve connectivity between existing lanes and paths, bike parking.

ROADWAY IMPROVEMENTS



Includes measures like widening roadways, turn lanes, on-street parking, medians, repairing potholes.

MICROMOBILITY



Includes measures like bikeshare facilities, scooter rentals, golf carts.

TRANSPORTATION TECHNOLOGY



Includes measures like traffic signal timing / coordination, traveler information, traffic monitoring, travel time monitoring.

SHOW US WHAT MATTERS TO YOU BY BUDGETING FOR EACH CATEGORY.
EACH BALL REPRESENTS $1,000. YOU HAVE $10,000 (10 BALLS).
PLACE YOUR 10 BALLS INTO THE JARS REPRESENTING
YOUR PRIORITIES FOR FUTURE FUNDING.

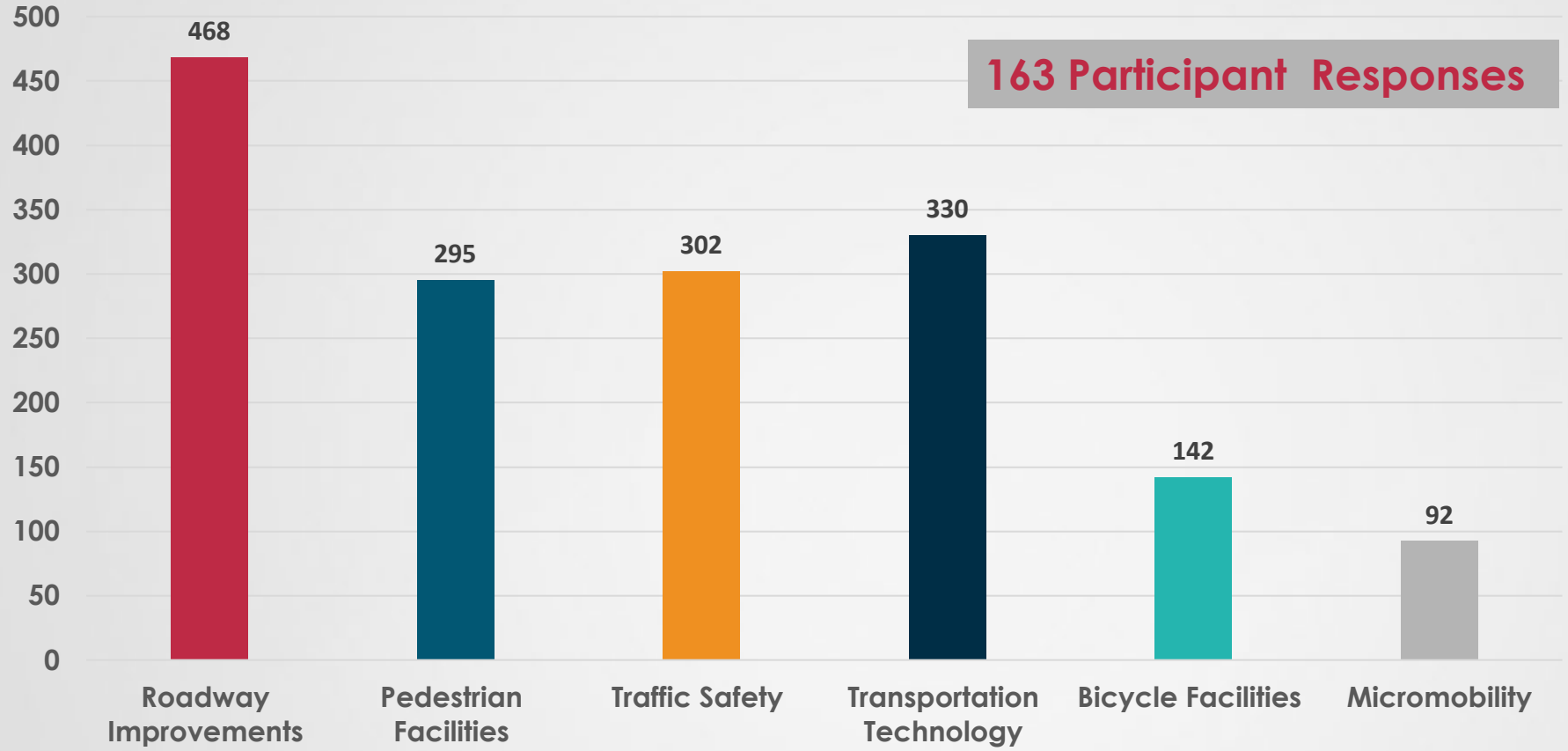
BUDGET FOR THE FUTURE

SHOW US WHAT MATTERS TO YOU BY BUDGETING FOR EACH CATEGORY.
EACH BALL REPRESENTS $1,000. YOU HAVE $10,000 (10 BALLS).
PLACE YOUR 10 BALLS INTO THE JARS REPRESENTING
YOUR PRIORITIES FOR FUTURE FUNDING.

Budget Prioritization Activity Results



Includes: Spring Fest, Online Feedback, Stakeholder Meeting



163 Participant Responses

Most of the participation results, 138 submissions were from the Spring Fest pop-up engagement. Online participation had received 9 submissions, and the Stakeholder Group had 16 submissions.

Policy Review



Recommendations for Pearland Code of Ordinances

Regulation Document	Location in Document	Item	Preliminary Suggested Change: Keep, Revise, Remove	Reason for Change
Engineering Design Criteria Manual	Sections 1.8.2, 1.8.3, 1.8.4	Construction Procedure Requirements	**Revise**	RE-examine required time for notices, consider increasing notice timeframe to accommodate staff availability
Engineering Design Criteria Manual	3.5	EXTRA TERRITORIAL JURISDICTION	**Revise**	Include language pertaining to S.B. 2038, which went into effect on September 1, 2023, generally authorizes residents of a city's extraterritorial jurisdiction ("ETJ") to petition for removal from the city's ETJ under certain circumstances. Chapter 6 of Design Manual was updated last in October 2020
Engineering Design Criteria Manual	6.1.2	ROADWAY DESIGN CRITERIA - roadside ditches	**Revise**	"New street construction that utilizes roadside ditches for storm water drainage is discouraged and must receive specific approval of the City." - Clarify departments or authoritative department
Engineering Design Criteria Manual	6.1.5	deviations from these design criteria	**Revise**	On a case-by-case basis the City of Pearland reserves the right to allow deviations from these design criteria. - specify responsible party
Engineering Design Criteria Manual, Pearland Thoroughfare Plan (prepared in July, 2015)	6.3. and 6.4 (Design Manual)	Thoroughfare, Roadway Classifications	**Revise**	Differences between the 2014 Thoroughfare Plan, and the classifications shown on 6.3 ROADWAY CLASSIFICATIONS

Next Steps



- 2nd Stakeholder Group Meeting
- Travel Demand Modeling
- Review Thoroughfare Plan
- Short-term Intersection Improvements Analysis
- Safety Toolbox




Thank You!




Regional Collaboration • Transportation Planning • Multimodal Mobility

Houston-Galveston Area Council

Kimley»Horn

Pearland Mobility Study
September 18th and 19th
Post 3rd Steering Committee Meeting Debrief Notes

NOTES FROM STEERING COMMITTEE MEETING (9/18):

- Trent mentioned the recommended sidewalk projects shown during presentation were likely already sidewalk projects from prior projects, or existing TxDOT planned projects
- Trent mentioned the dual left turn was placed due to bus traffic at Magnolia Pkwy and SH 35
- Vivek mentioned that the Travel Demand Model was used instead of Synchro for the long-term recommendations analysis, while Synchro was used for short-term and medium-term recommendations
- Trent mentioned that traffic often backs up near the Pearland Pkwy and John Lizer Rd intersection
- Raj mentioned the Pearland Mobility Study team to refer to the existing Multimodal Master Plan to see if the recommended projects were also called out in the former study
- Ana from TxDOT recommended that Railroad Crossings be moved to medium-term or long-term recommendations.
- Matt B. from PEDC mentioned that the Hastings Cannon Crossing recommendation is in the Pearland ETJ and not within the City's responsibility
- Yolci mentioned that signals work with one central controller
- Jeffrey from TxDOT recommended that future roadway designs be designed to federal standards during a funding application
    - Trent did mention that may have to be a case-by-case situation depending on local existing circumstances
- Martin mentioned that he would like the project team to meet with him following this Steering Committee meeting to look at intended Thoroughfare Recommendations along with the update Future Land Use Plan from the Pearland 2040 Comprehensive Plan

POST – STEERING COMMITTEE MEETING DEBRIEF WITH H-GAC (9/19):

- Kimley-Horn to go through the Multimodal Master Plan

  - If there is already a similar action item, refer to that one that is like what Pearland Mobility Study heard from 1st round of public engagement
  - Cross reference the sidewalk phasing program, see the Executive Summary
- Tentative date for 2nd Public Meeting: Oct. 19 – Farmer's Market
  - Depending on how the meetings go with the City next week, they will have to commit and give us the information they need, and that's going to be it
- Potentially aiming for the Council meeting on Feb. 10th as the final presentation, the last Council meeting can count as the 4th Steering Committee Presentation
- Schedule the Stakeholder Meeting – Week of October 7th, Wednesday or Thursday, or 14/15th
- ~~Vivek will email the City about a next-steps meeting – To include Martin, Raj, Yolci, Matt, Matt B from PEDC, Trent~~





PEARLAND MOBILITY STUDY STEERING COMMITTEE MEETING # 3





September 18, 2024

Regional Collaboration • Transportation Planning • Multimodal Mobility

H-GAC
Houston-Galveston Area Council

Introductions



- City of Pearland
- Steering Committee Members
- Study Team

Steering Committee



- Jildardo Arias – Friendswood City Engineer
- Carry Capers – Pearland Director of Parks & Recreation
- Jeffrey English – TxDOT Houston District
- Trent Epperson – Pearland City Manager
- Martin Griggs – Pearland Deputy Director of Community Development
- Rajendra Hada - TxDOT Brazoria Assistant Area Engineer
- Matt Hanks – Brazoria County Engineer
- Ana Ramirez Huerta – TxDOT Houston District
- Thomas Kirn – TxDOT Houston District
- Joshua Lee – Pearland Director of Communications
- J. Taylor – Pearland Fire Chief
- Yolci Ramirez – Pearland Traffic Engineer
- Raj Shrestha – Pearland City Engineer
- Johnny Spires – Pearland Police Chief
- John Thomas – Pearland Police Captain
- Heather Van Dine – Friendswood Assistant Director Operations of Engineering Department
- Lorenzo Wingate – Pearland Public Works Director
- Vance Wyly – Pearland Director of Community Development

Project Team - Pearland Mobility Study



- Qun Zhao – H-GAC Project Manager
- Carlene Mullins – H-GAC Principal Planner

- Vivek Deshpande – Kimley-Horn Project Manager
- Jenny Lai – Kimley-Horn Planner
- Ryan Graves – Kimley-Horn Planner

Houston-Galveston Area Council

Kimley»Horn
Expect More. Experience Better.

GRADIENT

HDR

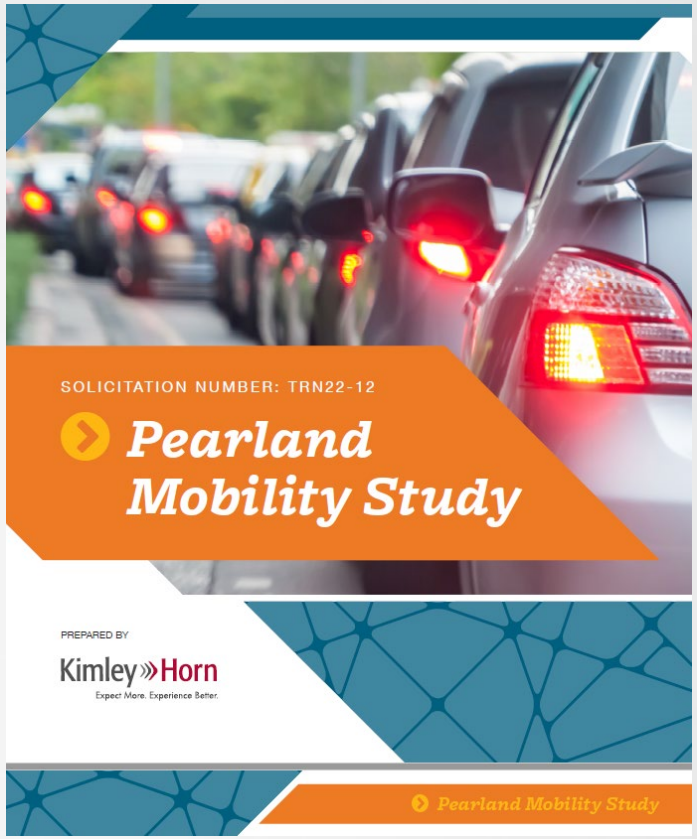
ATG | DCCM

EPS GROUP

Agenda



- Vision and Goals
- Project Schedule
- Existing Conditions
- Preliminary Recommendations
  - Short-term, medium-term, long-term
- Next Steps





Vision and Goals

Vision Statement

The Pearland Mobility Plan will **prioritize multi-modal improvements** and strategies to **improve mobility for people, goods, and services; enhance safety**; and **accommodate growth**. Furthermore, the plan will develop a **trackable list of projects and initiatives** for the future.

Goals

- Move People and Goods Efficiently
  - Updated Thoroughfare Plan
  - Traffic Analysis of Major Corridors & Key Intersections
  - Incorporate Transit Study Recommendations
- Improve Safety
  - Recommendations for Current Crash Hotspots
  - Recommendations on Improved Bike & Pedestrian Connections
- Strengthen Regional Economic Competitiveness
  - Transportation & Development Policy Review
  - Project prioritization & dashboard



Project Schedule

Schedule



Pearland Mobility Study

Task	2023 Winter	Spring	Summer	Fall	2024 Winter
Identification of Issues and Needs	■				
Data Assembly and Evaluation	■	■			
Analysis		■	■	■	
Recommendations		■	■	■	
Final Report				■	■
Public Outreach Plan					
Online Engagement		■	■		■
Public Meeting		●			●
Steering Committee Meetings	■	■		■	■
Stakeholder Meetings		◆			◆

We are here!



Existing Conditions

Feedback of Mobility Concerns



Locations with mobility issues and concerns identified by the Steering Committee or Stakeholders:

- Mykawa Road, from McHard Road up to Veterans Drive
  - Lack of roadway shoulder relief
  - Heavy truck traffic usage
  - Needs to be widened and connected to Veterans Drive
- Dixie Farm Road & Bailey Road
  - Extend past the City boundary
  - Connect to the western part of the City
- Main Street / SH 35
  - Roadway Improvements, resurfacing
  - Adding middle turn-lanes
- Manvel Road – Roadway Improvements, resurfacing
- FM 518 – General Congestion *(In FM 518 Corridor Study's Study Area)*

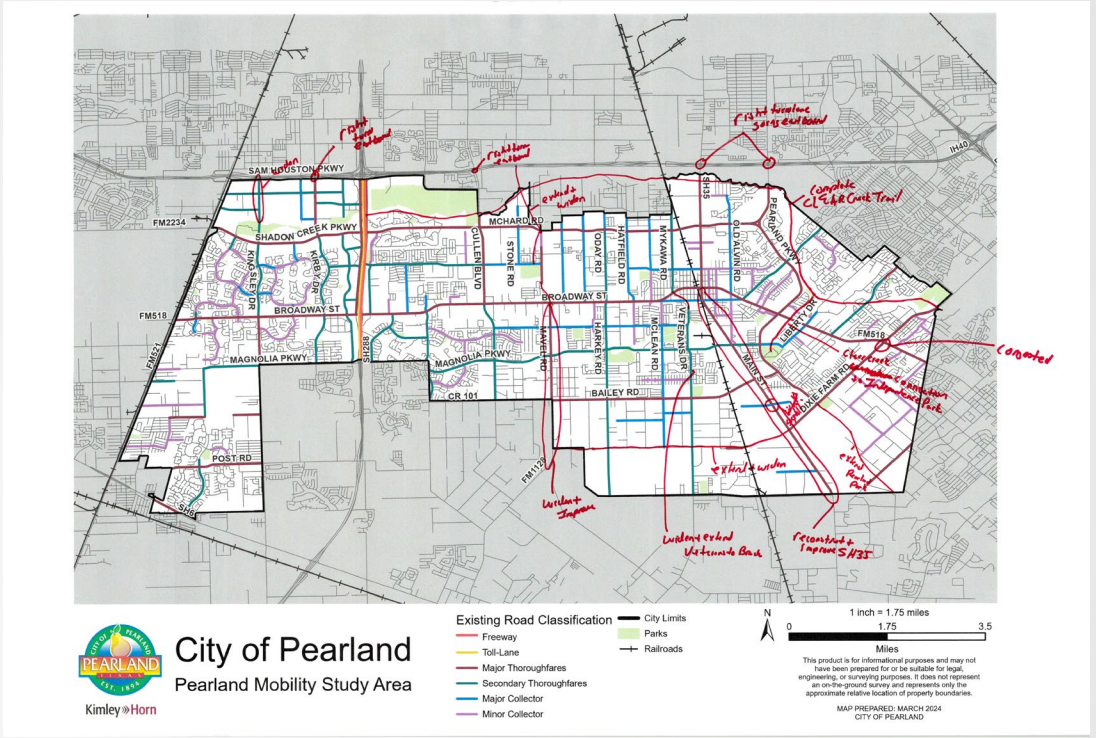
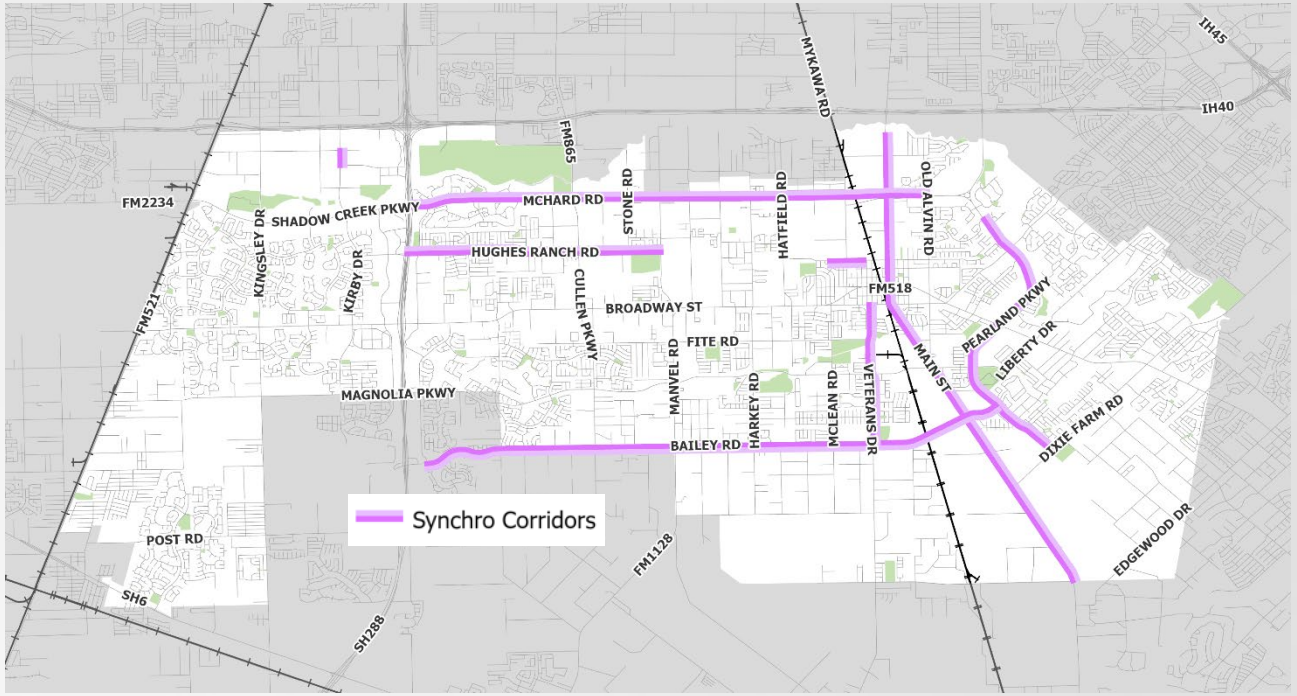


Photo: Map Feedback from 1st Stakeholders Group Meeting

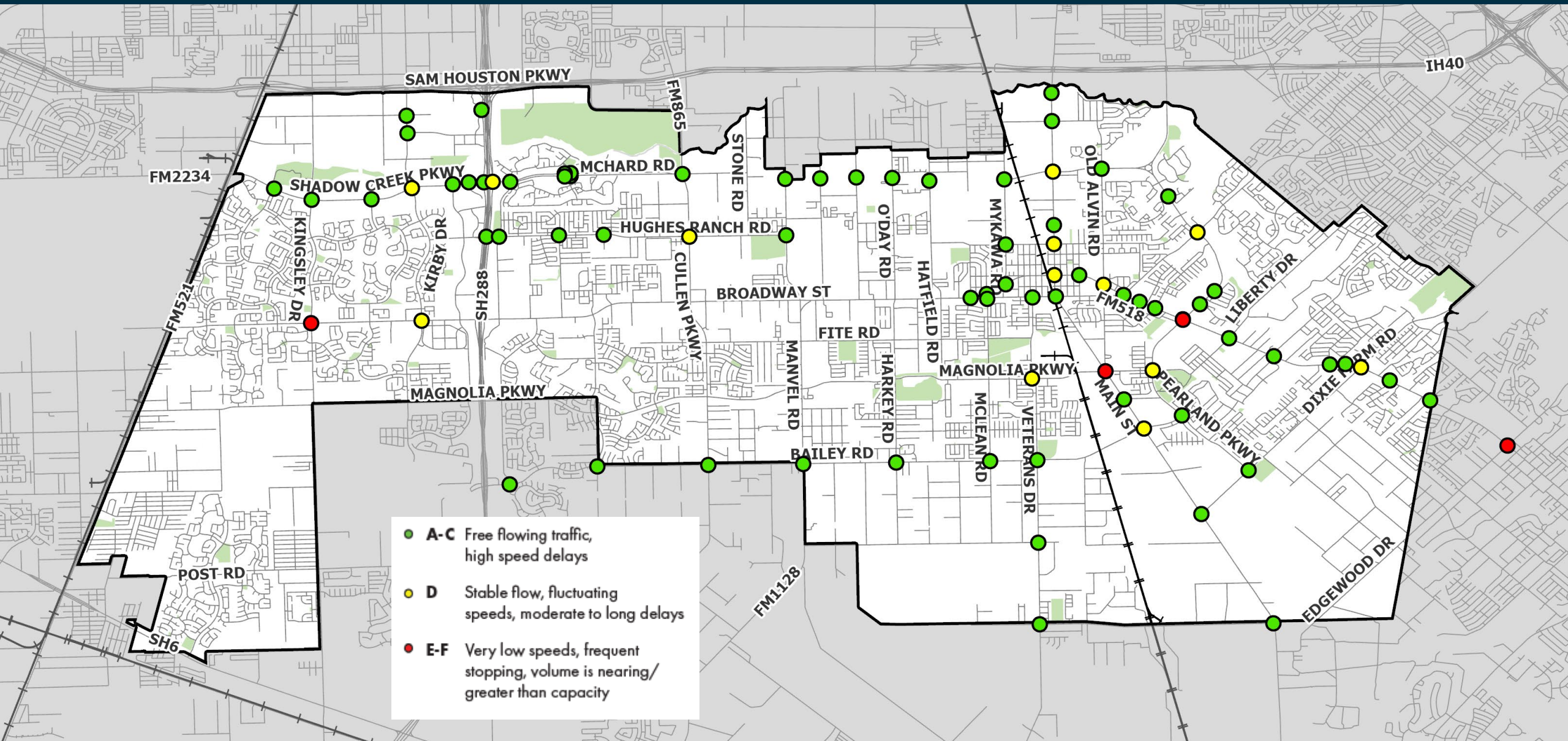
Existing Conditions: Signal Operations Analysis

- **Synchro model used to analyze AM and PM peak signal operations**
- **Analyzed approximately 60 signalized intersections along 7 corridors**
  - SH 35 (Flea Market – Hastings Cannon Road)
  - Pearland Parkway (Forest Park Ln – Dixie Farm Road)
  - Bailey Ave (Smith Ranch Road – Pearland Pkwy)
  - McHard Road (SH 288 – Old Alvin Road)
  - Veterans Dr (Walnut St – Hastings Cannon Road)
  - Hughes Ranch Road (SH 288 – Reid Blvd)
  - Kirby Dr (N Spectrum – S Spectrum)
  - Orange at Mykawa

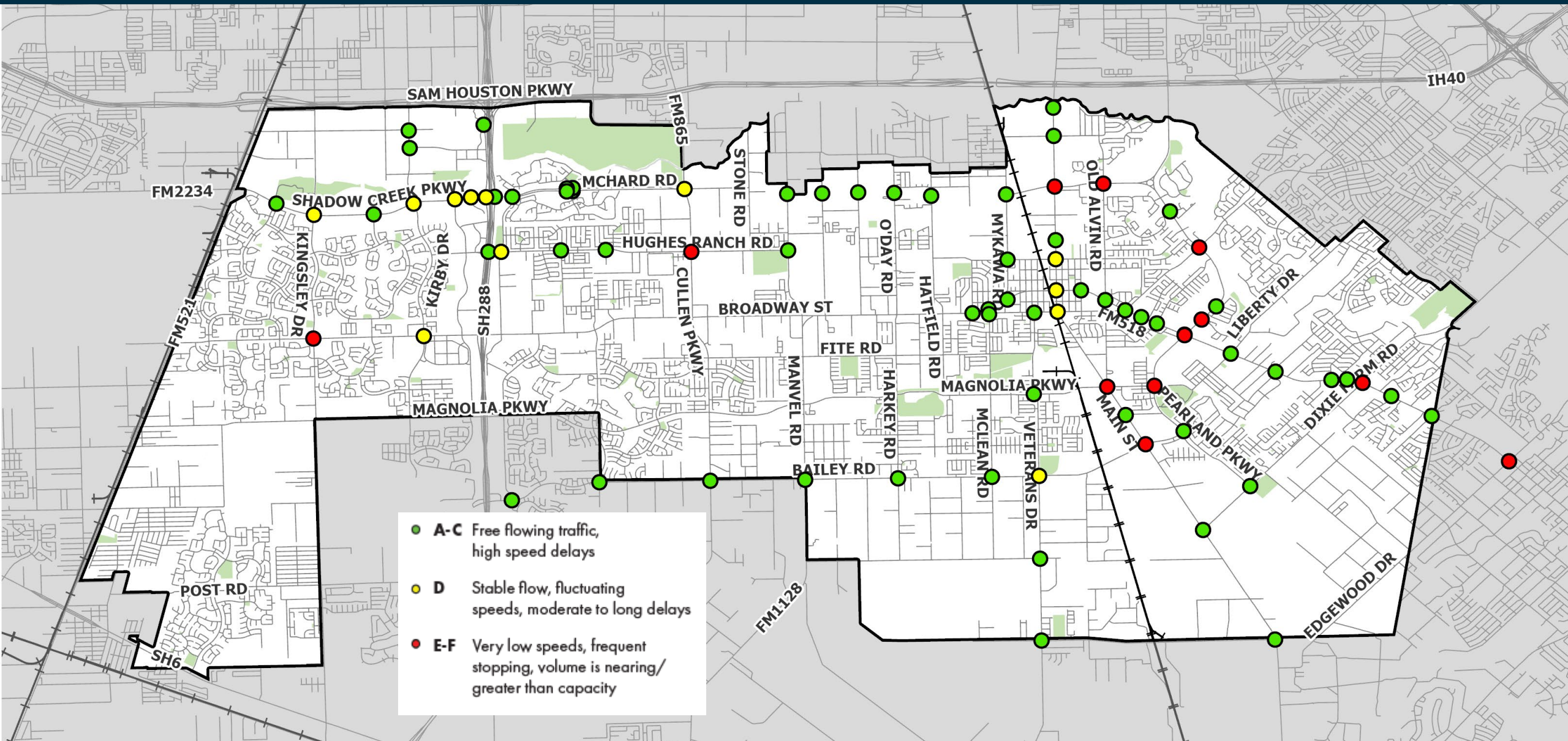
Some of the other intersections have been reviewed in previous studies.



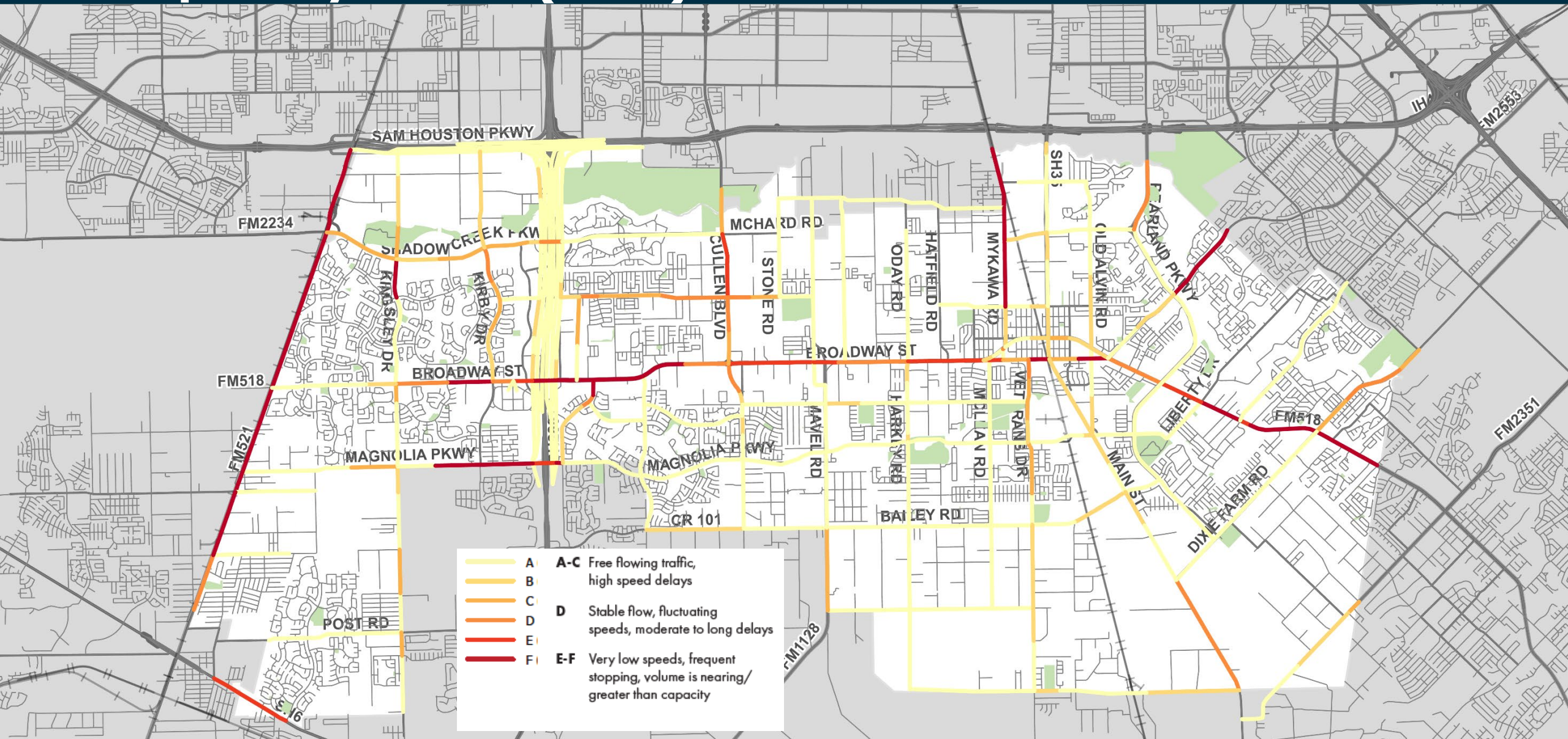
Existing Level of Service – AM



Existing Level of Service – PM



Existing Level of Service – 2023 Volume to Capacity Ratio (V/C)



Public Engagement Summary

1. 1st Steering Committee Meeting (January 23rd)
2. 1st Stakeholder Meeting (March 18th)
3. Pearland Spring Fest (April 6th)
4. Online Engagement (April 1st – April 26th)
5. 2nd Steering Committee Meeting (May 30th)



The photo to the left was taken at the 1st Stakeholder Meeting.







Photos to the left were taken at the Spring Fest.

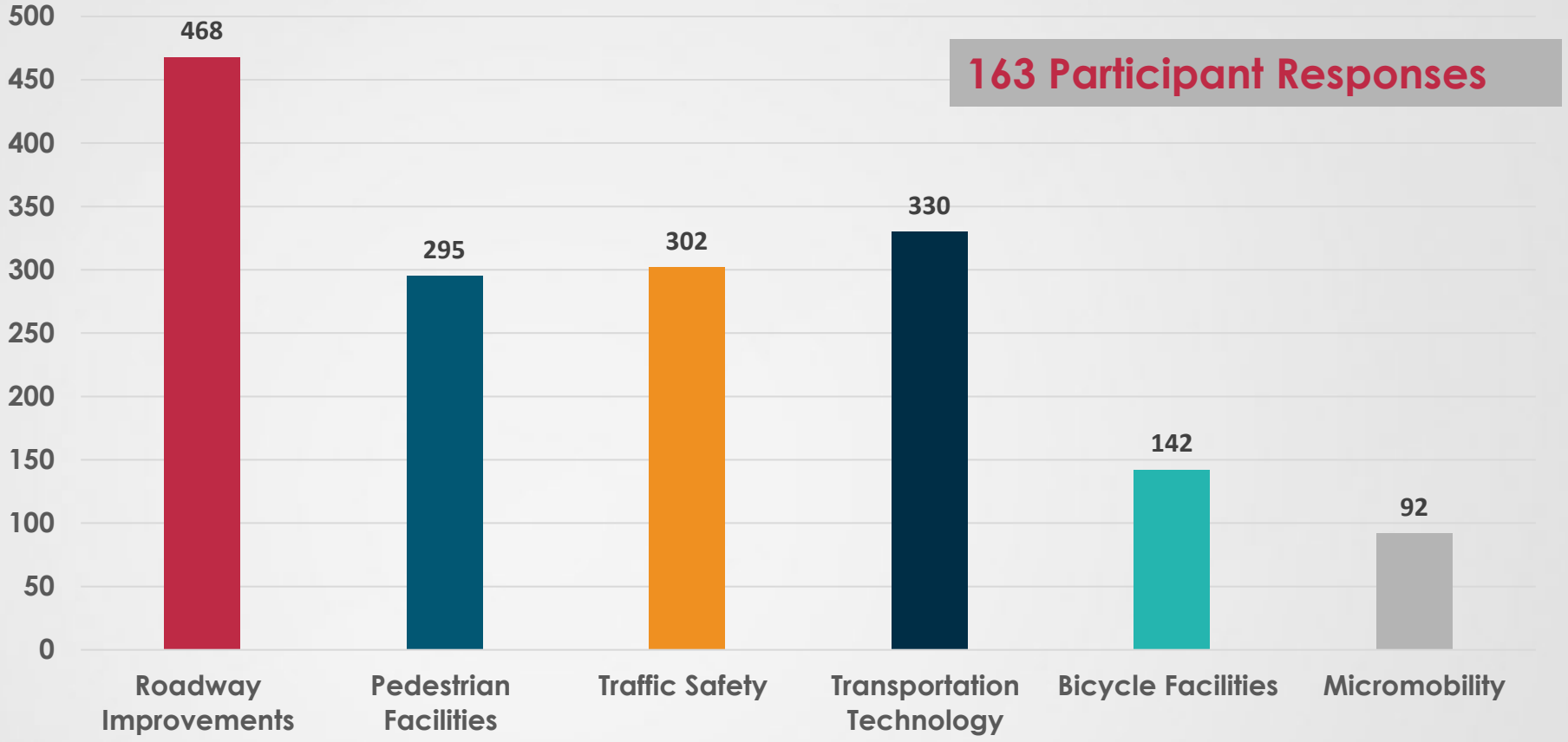
The photo above shows that the flyer, in English and Spanish, was used to spread the word about the projects and upcoming Spring Fest.

Public Engagement Feedback

225 Survey Responses

163 Budget Prioritization Participants

Budget Prioritization Activity Results



163 Participant Responses

Most of the participation results, 138 submissions were from the Spring Fest pop-up engagement. Online participation had received 9 submissions, and the Stakeholder Group had 16 submissions.



Preliminary Recommendations

Recommendations Approach



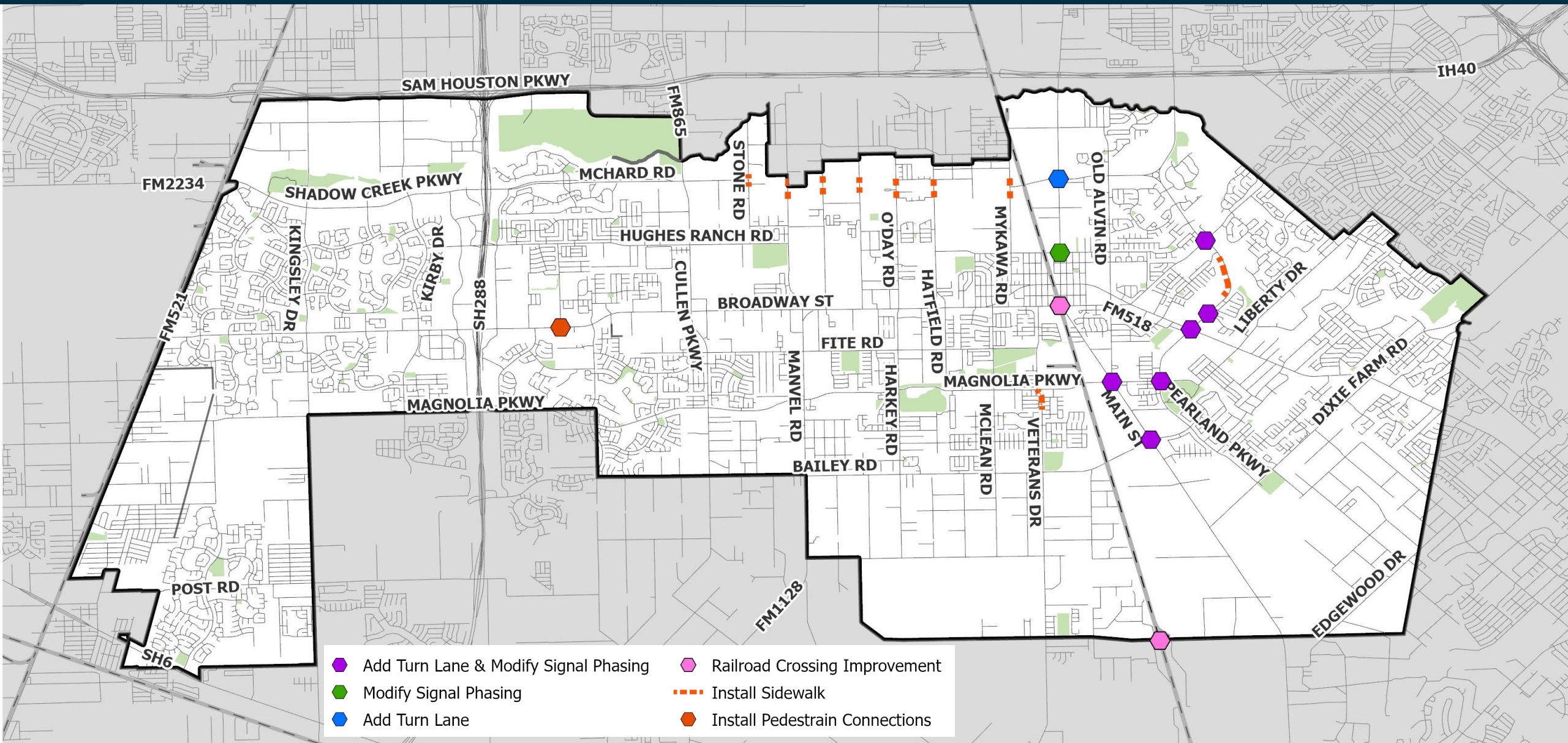
- Existing Conditions Analysis
- Identified Challenges
- Provided recommendations focused on improving mobility for all modes, safety, connectivity, and plan for future growth and are separated by timeframe below:
  - Short Term Improvements (0-5 years)
  - Medium Term Improvements (6-10 years)
  - Long Term Improvements (11+ years)

Short-Term Recommendations (0-5 Years)



- Pedestrian and Cyclist Infrastructure
- Intersection Analysis
- Technology Improvements
- Safety Improvements

Short-Term Recommendations (0-5 Years)



Pedestrian and Cyclist Infrastructure



Recommendations were based on first round of public engagement and existing conditions.

Recommendation Categories:

- Existing Infrastructure along Major Roadways
- School Connections
- East Pearland

Pedestrian Access Improvements



Issue:

The existing intersection at Miller Ranch Rd and FM 518 has ditches between sidewalk and right of way

Recommendation:

Provide pedestrian connection to the road for intersection crossings

Houston-Galveston Area Council

McHard Connecting Streets Improvements



Photo example of Garden Street intersection construction

Issue:

Due to the construction of McHard Street, connecting streets such as Stone, Roy, Max, Garden, O'Day, and Mykawa does not have connecting sidewalks.

Recommendation:

Install new sidewalks/sidewalk connections along connecting streets to McHard Road.

Houston-Galveston Area Council

School Crossing Improvements



Issue:

The crossings along Manvel Road, between neighboring subdivisions and Rogers Middle School and Berry Miller Junior High sees high amounts of pedestrian activity from the students. Existing, none of these crossings are marked or include safety signage.

Recommendation:

Install advanced warning signage for vehicles of school crossing, and stripe crossing.

School Crossing Improvements



Issue:

Pearland High School is next to multiple large residential subdivisions. The intersections circled in photo do not have crossing striping and are not signalized.

Recommendations:

Stripe intersection crossing along Pearland Parkway and Oiler Drive.

Install sidewalk between Barry Rose Road and Shallow Creek Drive.

Houston-Galveston Area Council

Pearland Parkway Improvements



Issue:

The segment of Pearland Parkway, situated between several large subdivisions and neighboring public and private schools, does not have sidewalks along either side of the road.

Recommendations:

Install sidewalks along the west side of the road, connecting to where the existing sidewalk network ends.

Veterans Drive Existing Sidewalk



Issue:

Missing sidewalk segment along the western side of Veterans Drive up to Magnolia

Recommendation:

Connect the existing sidewalk on Veterans Drive to Magnolia Parkway.

ADA Transition Plan



- Americans with Disabilities Act (ADA) – Civil Rights Law
- Title II – 'all government entities with > 50 employees'
- Title II administrative requirements
  - Completion of a Self-Evaluation
  - Development of ADA complaint procedure
  - Designation of 1 person to oversee Title II compliance
  - Develop ADA Transition Plan to schedule removal of barriers uncovered by 'Self Evaluation' process

Intersection Short-Term Improvements



S No	Intersection	Add Turn Lane	Modify Signal Timing
1	SH 35 at McHard Road	EBR and SBR	
2	SH 35 at Orange St		Remove E-W Split Phase; add FYA
3	SH 35 at Magnolia Road	Restripe E-W	Remove Split Phase
4	SH 35 at Bailey Road	SBR, EBR, WBR	Remove Split Phase
5	Pearland Pkwy at Hughes Road	NBR; Restripe E-W	Remove Split Phase
6	Pearland Pkwy at Province Village	Restripe E-W	Remove Split Phase
7	Pearland Pkwy at FM 518	WBR	Remove Split Phase
8	Pearland Pkwy at John Lizer Road	SBR	Adjust Timings

EBR = Eastbound Right-turn bay
SBR = Southbound Right-turn bay
WBR = Westbound Right-turn bay
NBR = Northbound Right-turn bay
SBL = Southbound Left-turn bay

Traffic Signal Technology Improvements



Recommendations to expand below equipment at all traffic signals

- Left-turn Flashing Yellow Arrow Displays
- Radar vehicle detection
- Battery Back-up Units
- Signal Communication (Fiber or Wireless)
- CCTV Cameras
- Accessible Pedestrian Signal (APS) Units
- Emergency Preemption Equipment

Traffic Technology Improvements



Technology Recommendations for System

- Leading Pedestrian Interval (LPI)
- Update Central Control System
- Coordinated Signal Timing Plans
- Staff Traffic Management Center
- Advanced Traffic Signal Performance Measures (ATSPMs)
- Arterial Dynamic Message Signs

Emerging Traffic Technology Improvements



- ITS Master Plan for the City
- Autonomous & Connected Vehicle (A/CV) Framework
- Regional Transportation Systems Management & Operations (TSMO)

At-Grade Rail Crossing Improvements

Walnut St Crossing



Houston-Galveston Area Council

At-Grade Rail Crossing Improvements

Hastings Cannon Crossing

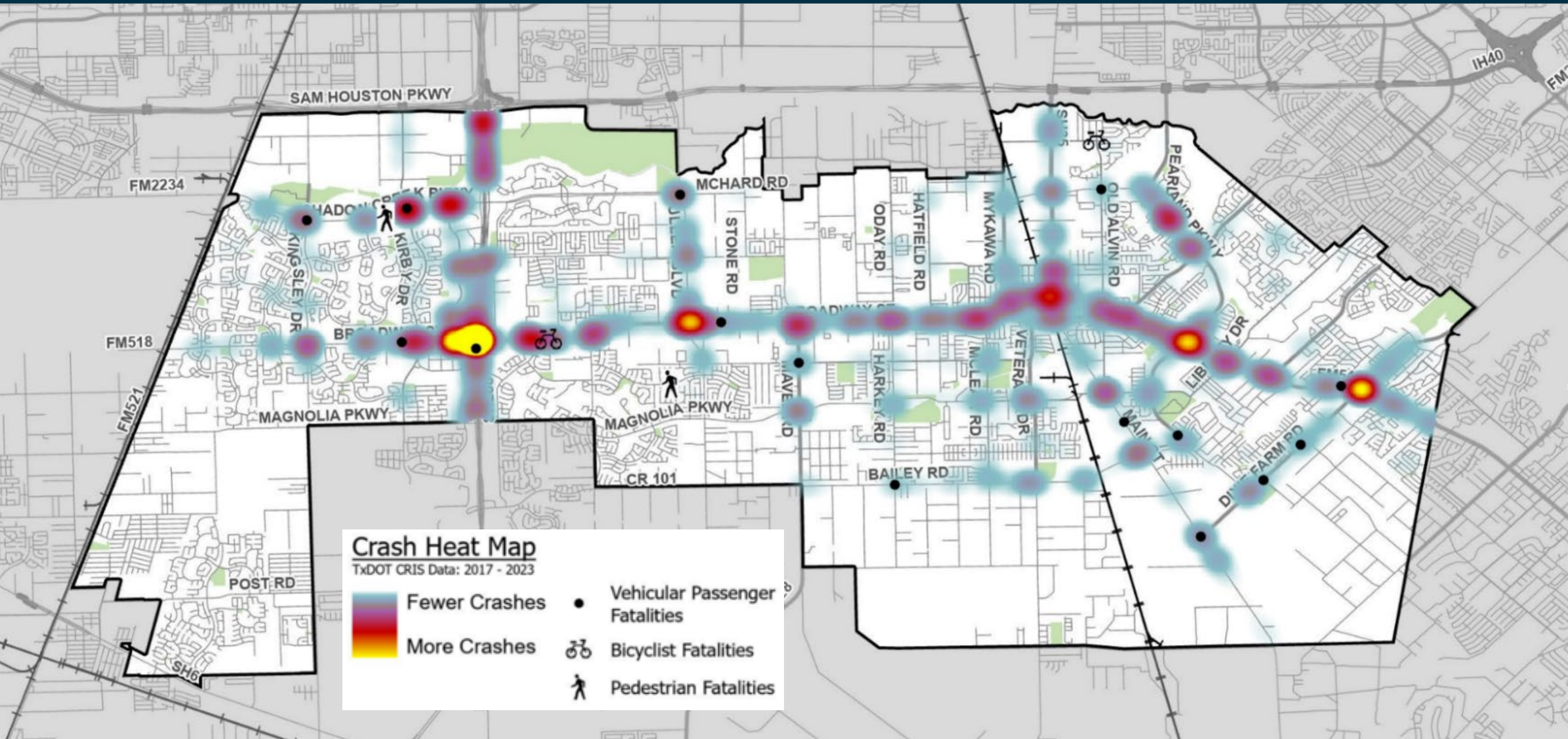


Houston-Galveston Area Council

Safety Recommendations

- Existing crash data between 2017 – 2023 mapped
- The High Injury Network focused on locations with crashes of severe and/or fatal crashes
- Countermeasure recommendations provided to key locations

Crash Analysis

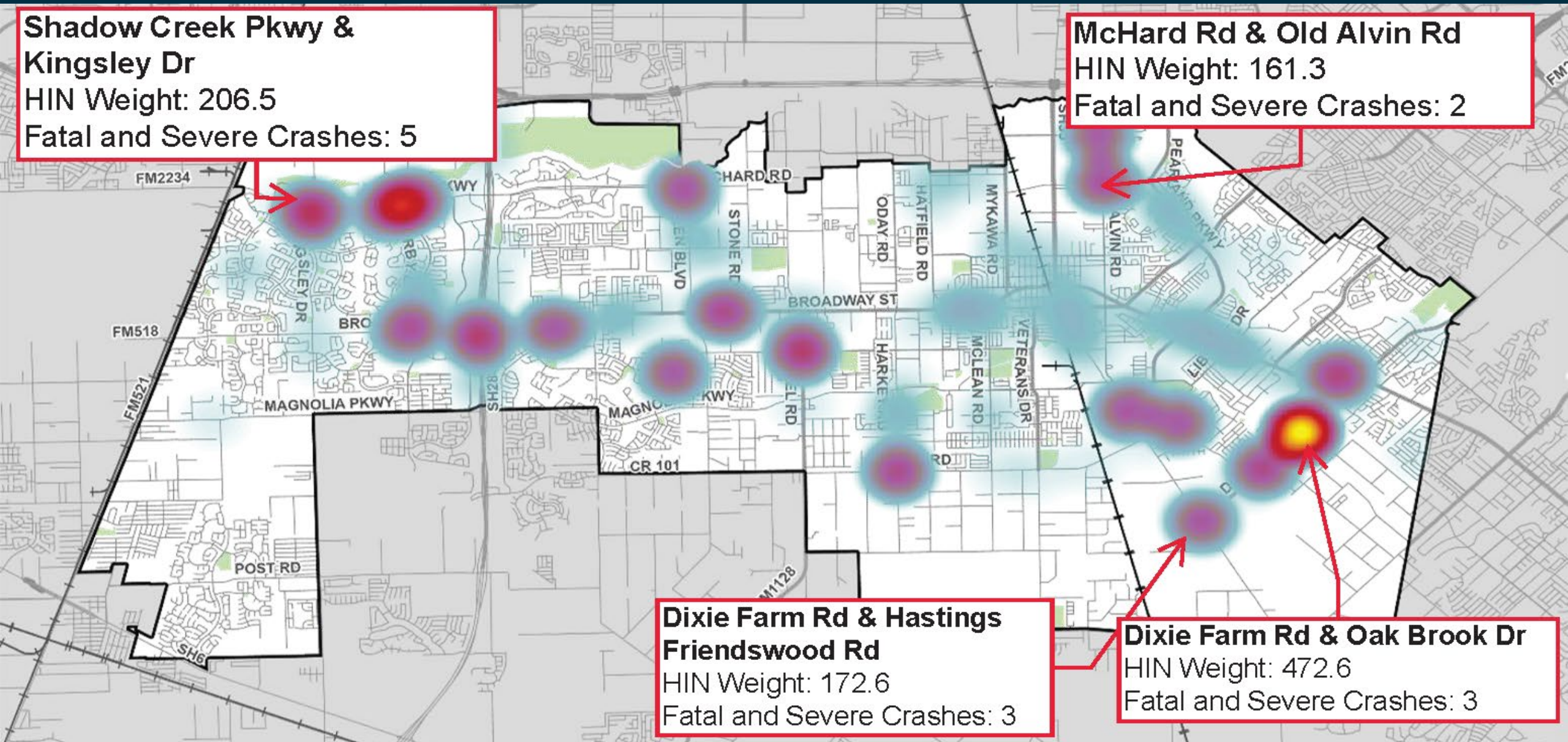


High Injury Network Factors



1) 7-Years of crash data
2) Share of road network
3) Level of analysis
4) Collision density
5) Roadway facility types
6) Equity
7) Consideration of modes

Crashes by HIN Weight



Countermeasures Recommendation

Intersections	Fatal & Severe Crash Count	Person Fatal Count	Person Suspected Serious Injury Count	HIN Weight
Dixie Farm Rd & Oakbrook Dr	3	3	2	472.6

Countermeasure Recommendation

1. Install Advanced Warning Signal
2. Change Left-Turn Movement from Permitted-Protected to Protected Only
3. Change East-West signal phasing to 'Split' phase
4. Interconnect adjacent traffic signals



Countermeasures Recommendation

Countermeasure Recommendation

Change Left-Turn Movement from Permitted-Protected to Protected

Intersections	Fatal & Severe Crash Count	Person Fatal Count	Person Suspected Serious Injury Count	HIN Weight
Shadow Creek Pkwy & Kingsley Dr	5	1	5	206.5



Countermeasures Recommendation

Intersections	Fatal & Severe Crash Count	Person Fatal Count	Person Suspected Serious Injury Count	HIN Weight
Dixie Farm Rd & Hastings Friendswood Rd	3	1	2	172.6

Countermeasure Recommendation

Install new traffic signal with advance signage for new traffic signal ahead



Countermeasures Recommendation

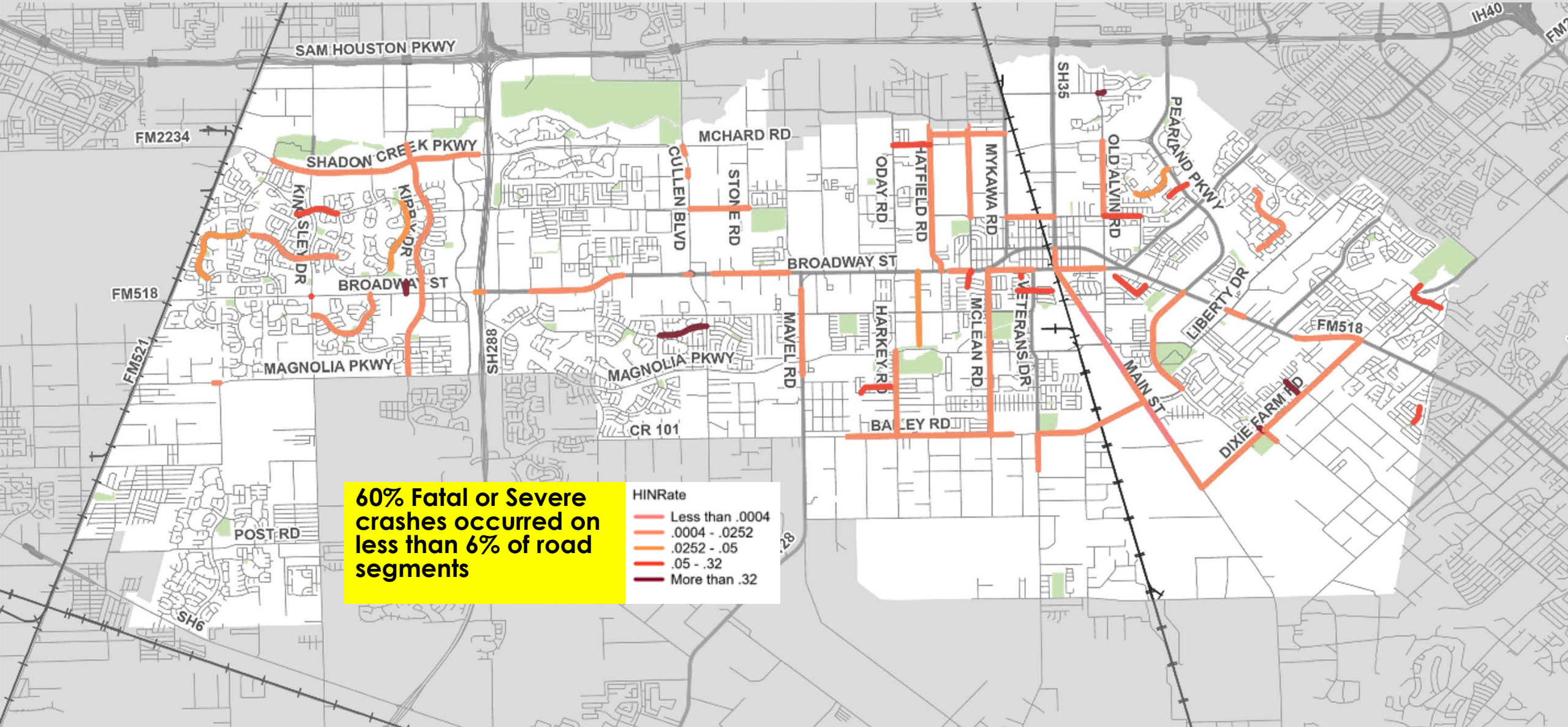
Countermeasure Recommendation

Install Advanced Warning Signal

Intersections	Fatal & Severe Crash Count	Person Fatal Count	Person Suspected Serious Injury Count	HIN Weight
McHard Rd & Old Alvin Rd	2	1	1	161.3



High Injury Network Road Segments



Segment Countermeasure Recommendations

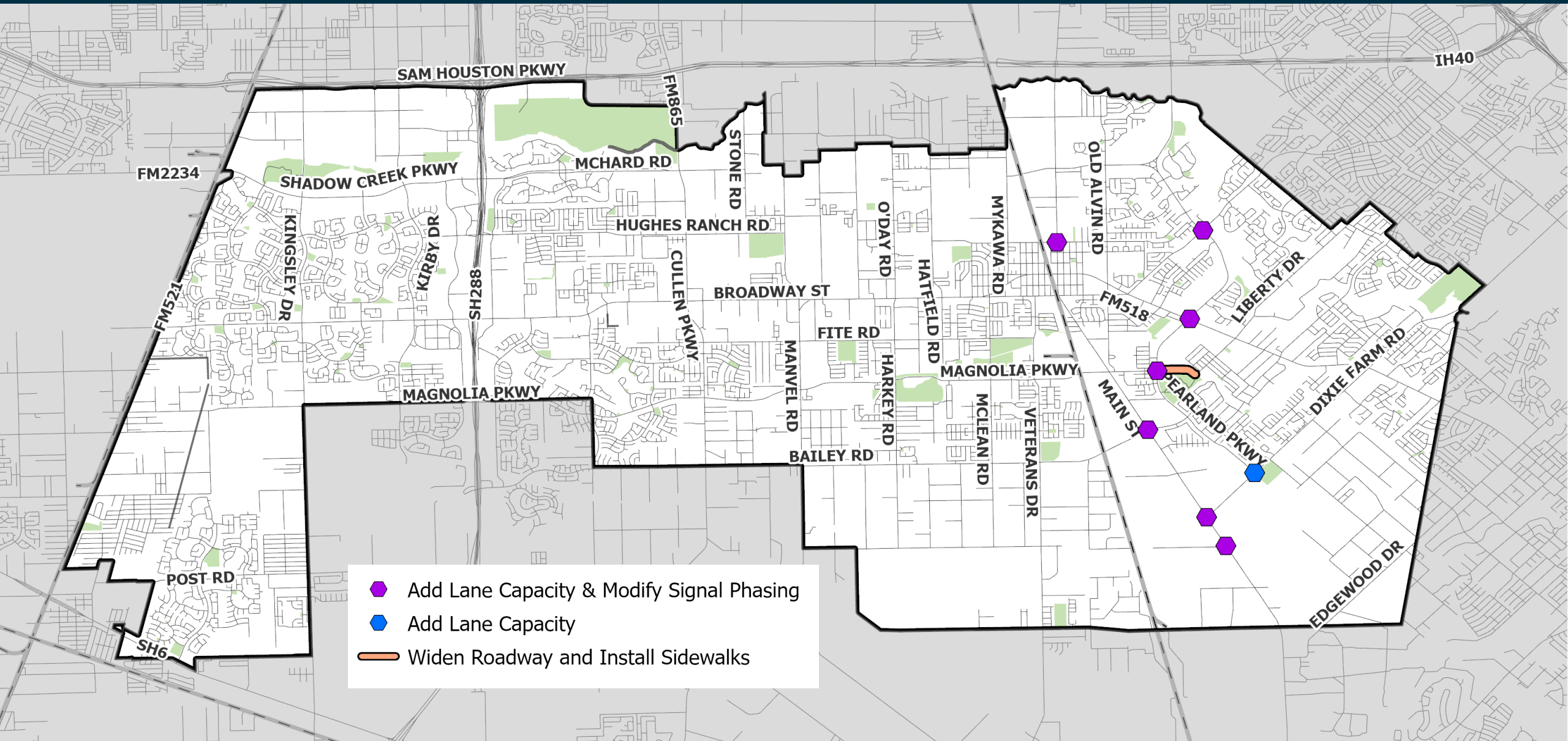
Segment	Crash History	Countermeasure Recommendation
Kirby Road from Shadow Creek Pkwy to Magnolia Pkwy	• One (1) fatal collision • Five (5) severe collisions • Two (2) bicyclist related collision • Two (2) fixed object collisions	• Install Warning/Guide Signs on Minor Approach (101) • Keep Vegetation Trimmed • Install Pavement Markings (401) (Shared Bike Lane Markings)
FM 2234 from SH 288 to Reflection Bay Drive	• One (1) fatal collision • Seven (7) severe (A) collisions • Two (2) pedestrian related collisions	• Improve/Install Sidewalks • Improve Pedestrian Signals • Install Pedestrian Signal (at missing locations)

Medium-Term Recommendations Assumptions



- Intersection Analysis
  - Assumed annual growth rate - 4%
  - Intersection evaluation - 2034

Medium Term Recommendations (6-10 Years)



Intersection Medium-Term Improvements



S No	Intersection	Add Lane Capacity	Modify Signal Phasing
1	SH 35 at Orange St	WBR	Adjust signal timings
2	SH 35 at Bailey Road	Second NBL	Remove Split Phase
3	SH 35 at Dixie Farm Road	NBR	Adjust signal timings
4	SH 35 at Hastings Canon Road	EBR	Adjust signal timings
5	Pearland Pkwy at Hughes Road	Second SBL, second WBL	Adjust signal timings
6	Pearland Pkwy at FM 518	EBR, NBR, SBR	Adjust signal timings
7	Pearland Pkwy at John Lizer Road	Widen John Lizer Road to 4-lane east of Pearland Pkwy	Remove Split Phase
8	Pearland Pkwy at Dixie Farm Road	WBR	

EBR = Eastbound Right-turn bay WBR = Westbound Right-turn bay NBL = Northbound Left-Turn Bay
SBR = Southbound Right-turn bay NBR = Northbound Right-turn bay SBL = Southbound Left-Turn Bay

Independence Park Improvements



Issue:

There are no sidewalks leading up to the existing trails leading up the Independence Park.

Recommendation:

Widen the called-out segment of John Lizer Road to a four-lane roadway to improve traffic capacity and install sidewalks along the south side of John Lizer Road as a continued sidewalks connection from the western residential neighborhood to Independence Park.

bility

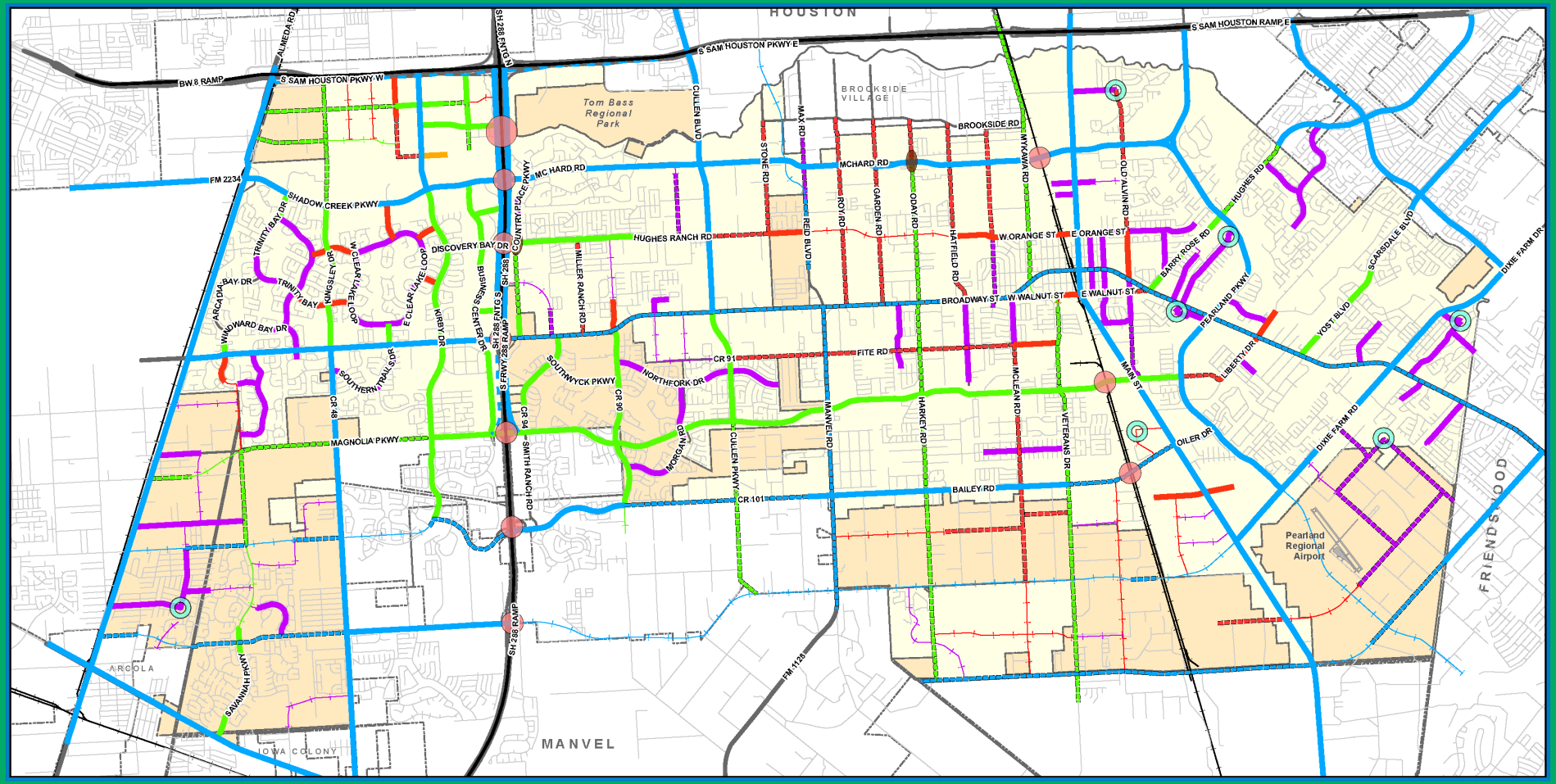
Houston-Galveston Area Council

Long-Term Recommendations (11+ Years)



- Thoroughfare Plan Updates
  - Travel Demand Modeling Results
- Recommended Widenings and Proposed Connections

Existing Thoroughfare Plan



CITY OF PEARLAND
THOROUGHFARE PLAN

Plan Approved: 9 AUG 2021
(Ord 1517-4)

120' Minimum ROW
- Major Thoroughfares - Sufficient Width
- Major Thoroughfares - To Be Widened
- Major Thoroughfares - To Be Acquired
- Major Thoroughfares - Proposed Frontage Road
- Freeway

100' Minimum ROW
- Secondary Thoroughfares - Sufficient Width
- Secondary Thoroughfares - To Be Widened
- Secondary Thoroughfares - To Be Acquired

Other
- Local Road - Special Designation

80' Minimum ROW
- Major Collector Streets - Sufficient Width
- Major Collector Streets - To Be Widened
- Major Collector Streets - To Be Acquired

60' Minimum ROW
- Minor Collector Streets - Sufficient Width
- Minor Collector Streets - To Be Widened
- Minor Collector Streets - To Be Acquired

- Proposed Grade Separation
- 15:1 R.O.W. Transition
- Collector Streets
- Street intersect at a right angle as part of a T or 4-way intersection
- Pearland City Limits
- Pearland ETJ

1 inch = 1 miles
0 0.5 1
Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: MAY 2023
CITY OF PEARLAND IT-GIS DEPARTMENT

Houston-Galveston Area Council

Travel Demand Model (TDM)

- Projected 2045 TDM based on existing Roadway Network

  "Pearland's traffic conditions in 2045 business as usual"

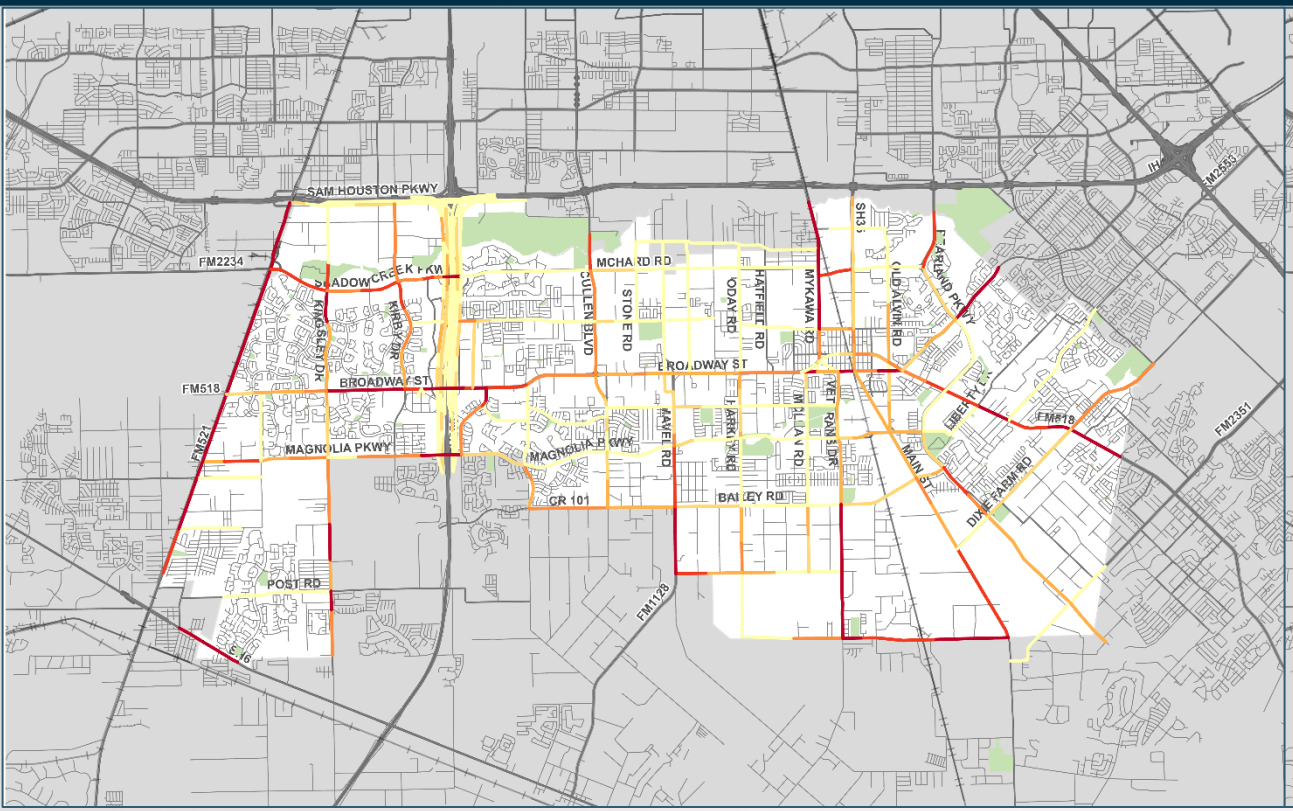
- Projected 2045 Travel Demand Model
  - Referenced the Future Land Use Plan (FLUP) from Pearland 2045 Comprehensive Plan

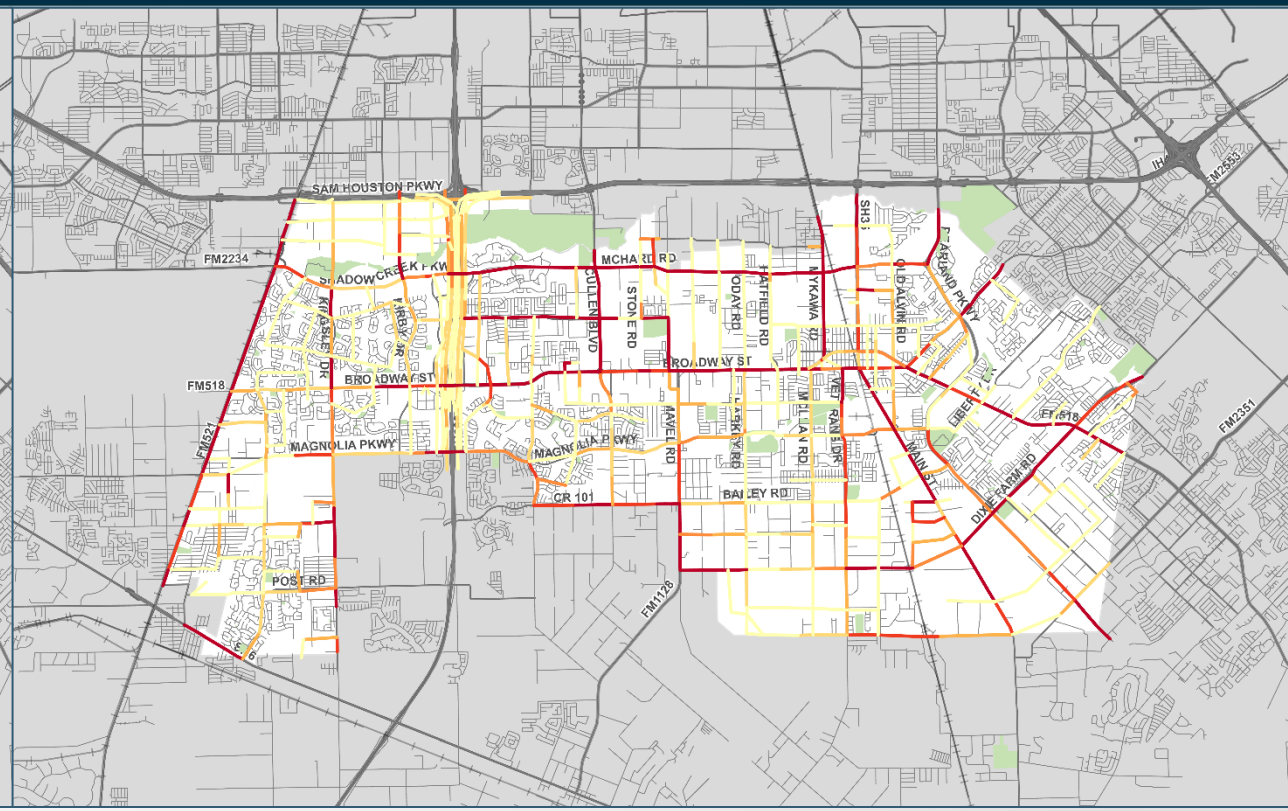
  "Pearland's traffic conditions in 2045 based on desired development patterns"

- Roadway Network Recommendations based on TDM

  "Recommendations to existing traffic conditions based on projections"

2045 V/C Ratio Scenario Comparison





Base TAZ demographics condition and initial road network from H-GAC TDM

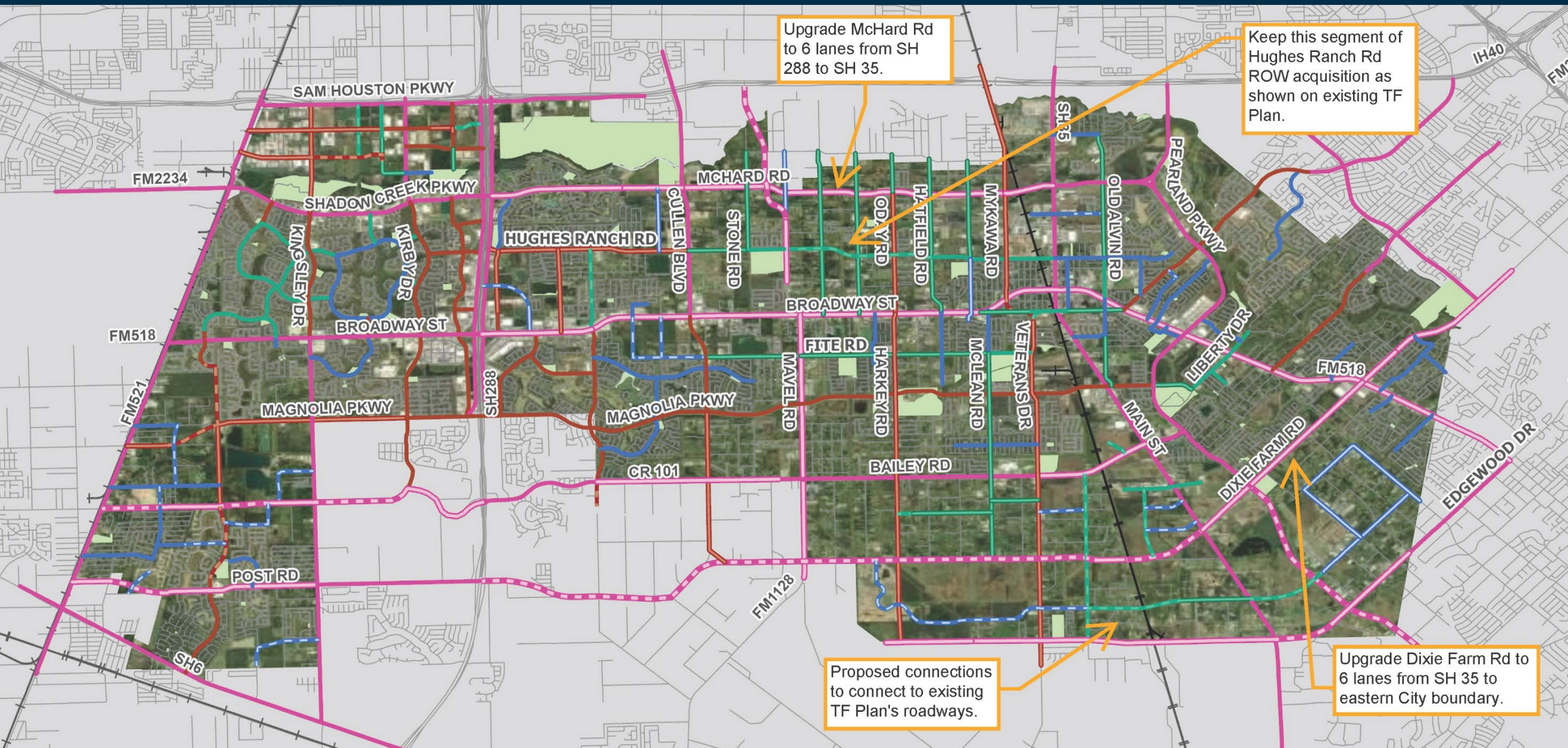
Updated TAZ demographics as per FLUP with Updated roadway network based on the City of Pearland Thoroughfare plan

Key Roadways Recommendations

Roadway (2045 V/C with FLUP)	2023	2045	Recommendation
Veterans Drive (V/C ~ 0.9)	**2 lanes**	**Secondary Thoroughfare – 4 lanes**	Follow Current TF Plan: 100' Minimum Thoroughfare - To be Widened
Dixie Farm Road (V/C ~ 1.0)	**4 lanes**	**Major Thoroughfare – 4 lanes**	Upgrade to 6 Lanes
McHard Road (V/C ~ 1.3)	**4 lanes**	**Major Thoroughfare – 4 lanes**	Upgrade to 6 lanes between SH 288 and SH 35
Broadway Street (V/C ~ 1.2)	**4 lanes**	**Major Thoroughfare – 6 lanes**	TxDOT plans in place to be widened up to 150 feet with 6 lanes
Hughes Ranch Road (Between Reid Blvd and Hatfield Rd.	**To be acquired**	**Minor Collector – 4 lanes**	Remain in the updated Thoroughfare Plan as To Be Acquired

Houston-Galveston Area Council

Proposed Thoroughfare Recommendations



Policy Review – Short Term Recommendations

Recommendations for Pearland Code of Ordinances

Regulation Document	Location in Document	Item	Preliminary Suggested Change: Keep, Revise, Remove	Reason for Change
Engineering Design Criteria Manual	Sections 1.8.2, 1.8.3, 1.8.4	Construction Procedure Requirements	**Revise**	RE-examine required time for notices, consider increasing notice timeframe to accommodate staff availability
Engineering Design Criteria Manual	3.5	EXTRA TERRITORIAL JURISDICTION	**Revise**	Include language pertaining to S.B. 2038, which went into effect on September 1, 2023, generally authorizes residents of a city's extraterritorial jurisdiction ("ETJ") to petition for removal from the city's ETJ under certain circumstances. Chapter 6 of Design Manual was updated last in October 2020
Engineering Design Criteria Manual	6.1.2	ROADWAY DESIGN CRITERIA - roadside ditches	**Revise**	"New street construction that utilizes roadside ditches for storm water drainage is discouraged and must receive specific approval of the City." - Clarify departments or authoritative department
Engineering Design Criteria Manual	6.1.5	deviations from these design criteria	**Revise**	On a case-by-case basis the City of Pearland reserves the right to allow deviations from these design criteria. - specify responsible party
Engineering Design Criteria Manual, Pearland Thoroughfare Plan (prepared in July, 2015)	6.3. and 6.4 (Design Manual)	Thoroughfare, Roadway Classifications	**Revise**	Differences between the 2014 Thoroughfare Plan, and the classifications shown on 6.3 ROADWAY CLASSIFICATIONS

Next Steps



- 3rd Stakeholder Group Meeting
- 2nd Public Meeting
- Online Engagement




Thank You!




Regional Collaboration • Transportation Planning • Multimodal Mobility

H-GAC
Houston-Galveston Area Council

Questions?



- Qun Zhao – H-GAC Project Manager

  Qun.Zhao@h-gac.com

  832-681-2580

- Carlene Mullins – H-GAC Deputy Project Planner

  Carlene.Mullins@h-gac.com

  832-681-2585

Kimley»Horn

Pearland Mobility Study
February 20th, 2025, 9:30 PM
Virtual TEAMS Meeting
Agenda: 4th Steering Committee Meeting

Organization	Attendee	Role	Organization
Steering Committee Members	Qun Zhao	Project Manager	H-GAC
	Carlene Mullins	Deputy Project Manager	H-GAC
	Monique Johnson	Subregional Planning Group Manager	H-GAC
	Rodney Sigua	Planner	H-GAC
	Trent Epperson	City Manager	City of Pearland
	Rajendra Shrestha	City Engineer	City of Pearland
	Yolci Ramirez	Traffic Engineer	City of Pearland
	Martin Griggs	Community and Development Deputy Director	City of Pearland
	Joshua Lee	Communications Director	City of Pearland
	Lorenzo Wingate	Public Works Director	City of Pearland
	John B. Thomas	Police Captain	City of Pearland
	Jack J. Taylor	Fire Department Chief	City of Pearland
	Jil Arias	Director of Engineering	City of Friendswood
	Matt Hanks	County Engineer	Brazoria County
	Jeffrey English	Planner	TxDOT- Houston District
	Ana Ramirez Huerta	Planner	TxDOT- Houston District
	Qing Li	Planner	TxDOT- Houston District
Consultants	Jenny Lai	Planner	Kimley-Horn
	Vivek Deshpande	Engineer	Kimley-Horn

Notes:

Thoroughfare Plan Updates

- Update #5 – Mykawa Rd: T. Epperson, City Manager suggested project team to look into keeping a T-Intersection connection from FM 518 to Walnut. The existing Thoroughfare Pan's S-Curve alignment is a difficult roadway geometry to work towards.
- Update #6 – In correlation to the suggestion for Update #5 (above), examine alternative connection for connecting street to Walnut St.
- Update #7 – In addition to this update, examine existing Minor Collector segment from Broadway to Orange Street also be downgraded to Local Street
- Update #9 – Examine if the proposed westward alignment would be too close to the railroad. R. Shrestha mentioned during meeting that existing Plat already shows the updated alignment presented.

Council Adoption Coordination

- T. Epperson mentioned that Council is likely going to be busy with budget updates in late April / early May, and recommended that the consultants coordinate and aim for late May initial presentation
- Q. Zhao mentioned that she will coordinate with Pearland's Engineering Department staff on next steps for Council Presentation Dates




Pearland Mobility Study
Steering Committee Meeting # 4




February 20, 2025

Regional Collaboration • Transportation Planning • Multimodal Mobility

Houston-Galveston Area Council

Introductions



- City of Pearland
- Steering Committee Members
- Study Team

Steering Committee



- Jildardo Arias – Friendswood City Engineer
- Carry Capers – Pearland Director of Parks & Recreation
- Jeffrey English – TxDOT Houston District
- Trent Epperson – Pearland City Manager
- Martin Griggs – Pearland Deputy Director of Community Development
- Rajendra Hada - TxDOT Brazoria Assistant Area Engineer
- Matt Hanks – Brazoria County Engineer
- Ana Ramirez Huerta – TxDOT Houston District
- Thomas Kirn – TxDOT Houston District
- Joshua Lee – Pearland Director of Communications
- J. Taylor – Pearland Fire Chief
- Yolci Ramirez – Pearland Traffic Engineer
- Raj Shrestha – Pearland City Engineer
- Johnny Spires – Pearland Police Chief
- John Thomas – Pearland Police Captain
- Heather Van Dine – Friendswood Assistant Director Operations of Engineering Department
- Lorenzo Wingate – Pearland Public Works Director
- Vance Wyly – Pearland Director of Community Development

Project Team - Pearland Mobility Study



- Qun Zhao – H-GAC Project Manager
- Carlene Mullins – H-GAC Principal Planner

- Vivek Deshpande – Kimley-Horn Project Manager
- Jenny Lai – Kimley-Horn Planner
- Ryan Graves – Kimley-Horn Planner

Houston-Galveston Area Council

Kimley»Horn
Expect More. Experience Better.

GRADIENT

HDR

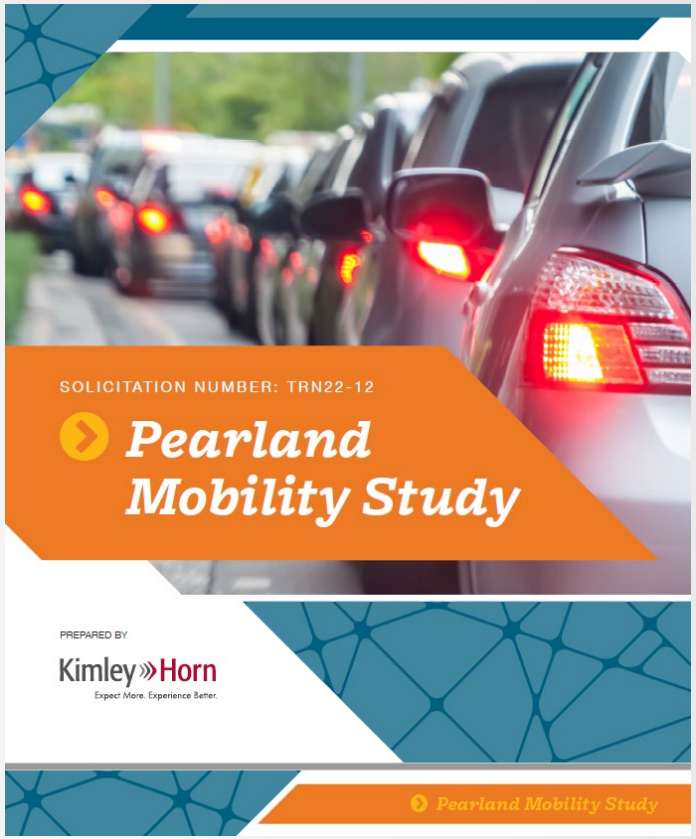
ATG | DCCM

EPS GROUP

Agenda



- Project Schedule
- Project Updates
  - Public Engagement
  - Travel Demand Modeling Results
  - Updated Thoroughfare Plan
  - Project Prioritization Criteria
  - Previously Shared Recommendations



Schedule



Pearland Mobility Study

	2023	2024											2025			
Task	**Winter**			**Spring**			**Summer**			**Fall**			**Winter**			**Spring**
Identification of Issues and Needs	■	■														
Data Assembly and Evaluation	■	■	■	■												
Analysis			■	■	■	■	■	■								
Recommendations			■	■	■	■	■	■	■	■	■	■	■			
Final Report													■	■	■	■
Public Outreach Plan																
Online Engagement					■	■							■	■		
Public Meeting							●							●		
Steering Committee Meetings			■					■				■			■	
Stakeholder Meetings						◆								◆		
City Council Presentation																◆

We are here!



Project Updates

2nd Round of Public Engagement



Events:

- **Old Pearland Farmer's Market (January 18th, 2025)**
  - The Project team had a booth 9am – 1pm
  - Solicited feedback on the proposed recommendations

- **Online Engagement (January 14th – February 14th, 2025)**
  - Mirroring the Farmer's Market, the PDF versions of the boards posted online for feedback

Engagement Feedback



- January 18 – Farmer's Market: 165 visitors (excluding children) stopped by the Project Team's booth.
- Pearland Mobility Project Website Visitors (January-February) -187 visitors.
- Feedback Received – 12 Comments on the proposed recommendations.

Proposed Recommendations Feedback



"The school buses have difficulty making a right turn from Broadway Street onto Sunrise Meadow Dr."



Eight out of the 12 inputs received pertained to sidewalk-related improvements outside of the ones recommended by the Study Team

"Add sidewalk at roundabout from Lakes of Highland Glen to Cockrell Elementary"

"More sidewalks everywhere are needed"



"Fix signal timing at Magnolia & Pearland Pkwy."

"Left turn light at Magnolia and McLean, the left on Magnolia heading south. The light often skips the turn."

"These proposals are awesome! Thank you for these projects to improve the city."

Project Public Engagement Summary

In total, the Pearland Mobility Study held:

- 4 Steering Committee Meetings
- 2 Stakeholders Group Meetings
- 2 Public Meetings
- 2 One-Month Online Engagement

There were...

643
Total Website Visits

175
Outreach Activity Participants







Travel Demand Model (TDM)

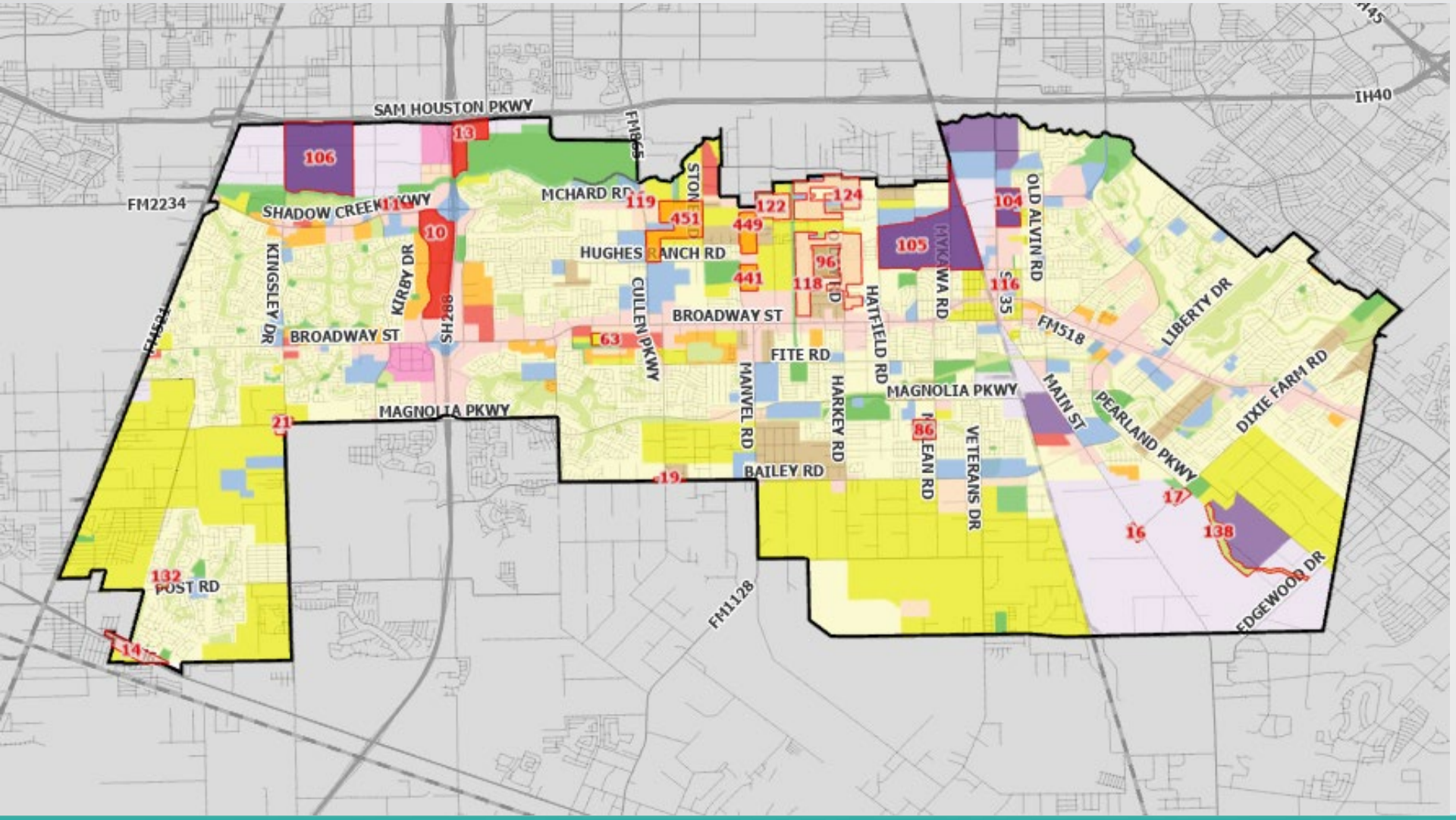
- Base 2045 Travel Demand Model

"Pearland's traffic conditions in 2045 business as usual"

- Projected 2045 Travel Demand Model
  - Referenced the Future Land Use Plan (FLUP) from Pearland 2045 Comprehensive Plan
  - Thoroughfare Plan Updates

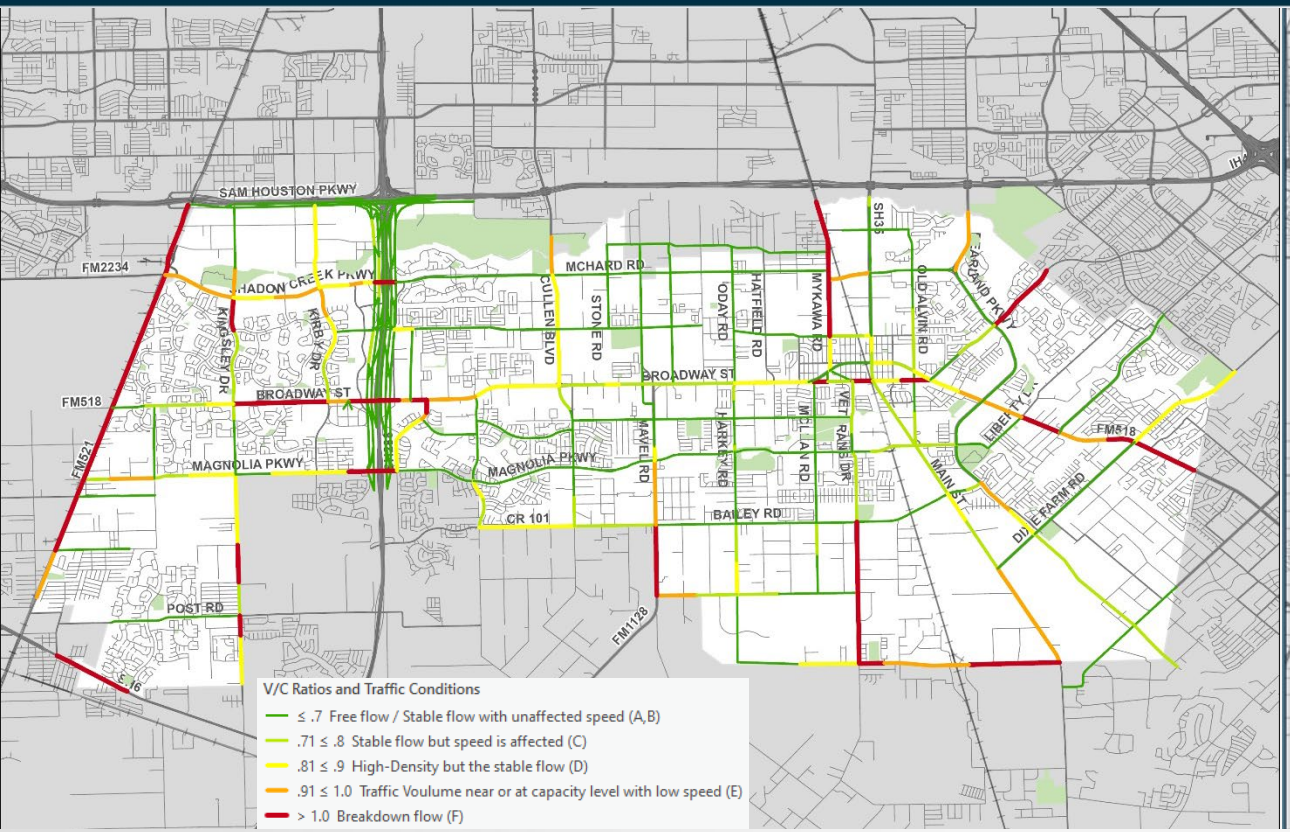
"Pearland's traffic conditions in 2045 based on desired development patterns"

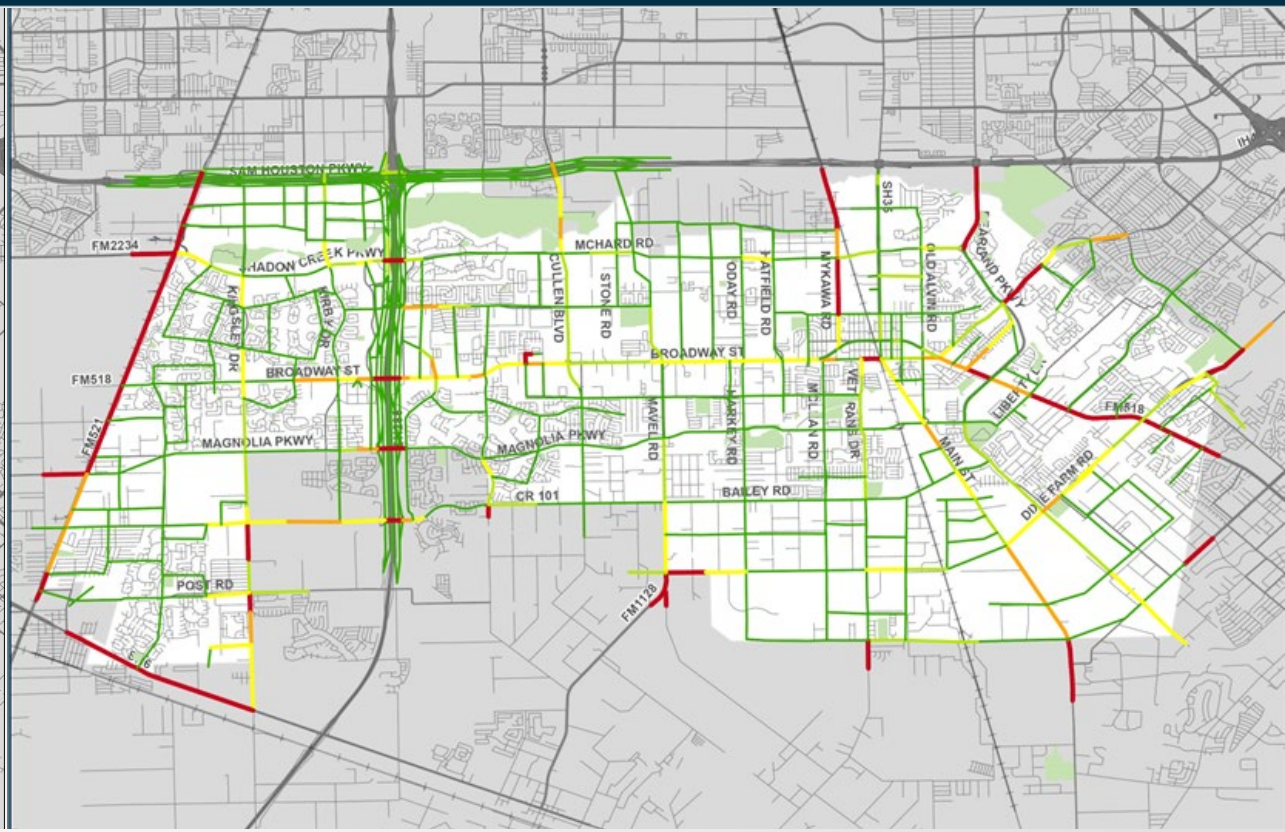
Updated Modeling Methodology



1. Mixed-Use assumption (Object ID 122, 124) = 20 people per acre
   - In former modeling, 33 people per acres was referenced
2. Urban Living: (Object IDs 441, 449, 451) = 20 people per acre
   - In former modeling, 33 people per acres was referenced
3. Updated TDM numbers due to existing vacancies: (Object IDs 10, 11, 13, 14, 16, 17, 19, 21, 46, 63, 86, 96, 104, 105, 106, 116, 118, 119, 122, 132, 138)

Travel Demand Modeling (Daily Traffic)

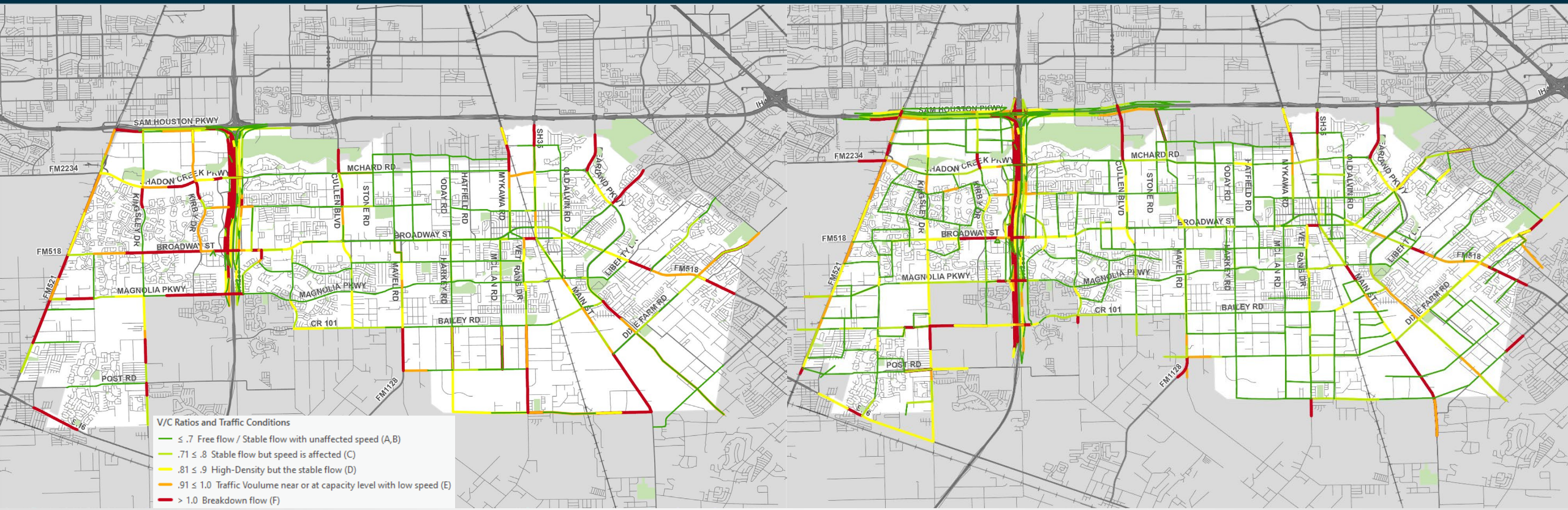




2045 initial road network from H-GAC TDM, using 24 Hour Traffic Volume Counts

Updated TAZ demographics as per FLUP with Updated roadway network based on the City of Pearland Thoroughfare plan

Travel Demand Modeling (PM Peak Hours)



2045 initial road network from H-GAC TDM, using Afternoon Peak Period Traffic Counts

Updated TAZ demographics as per FLUP with Updated roadway network based on the City of Pearland Thoroughfare plan



Thoroughfare Plan Update

A Thoroughfare Plan:



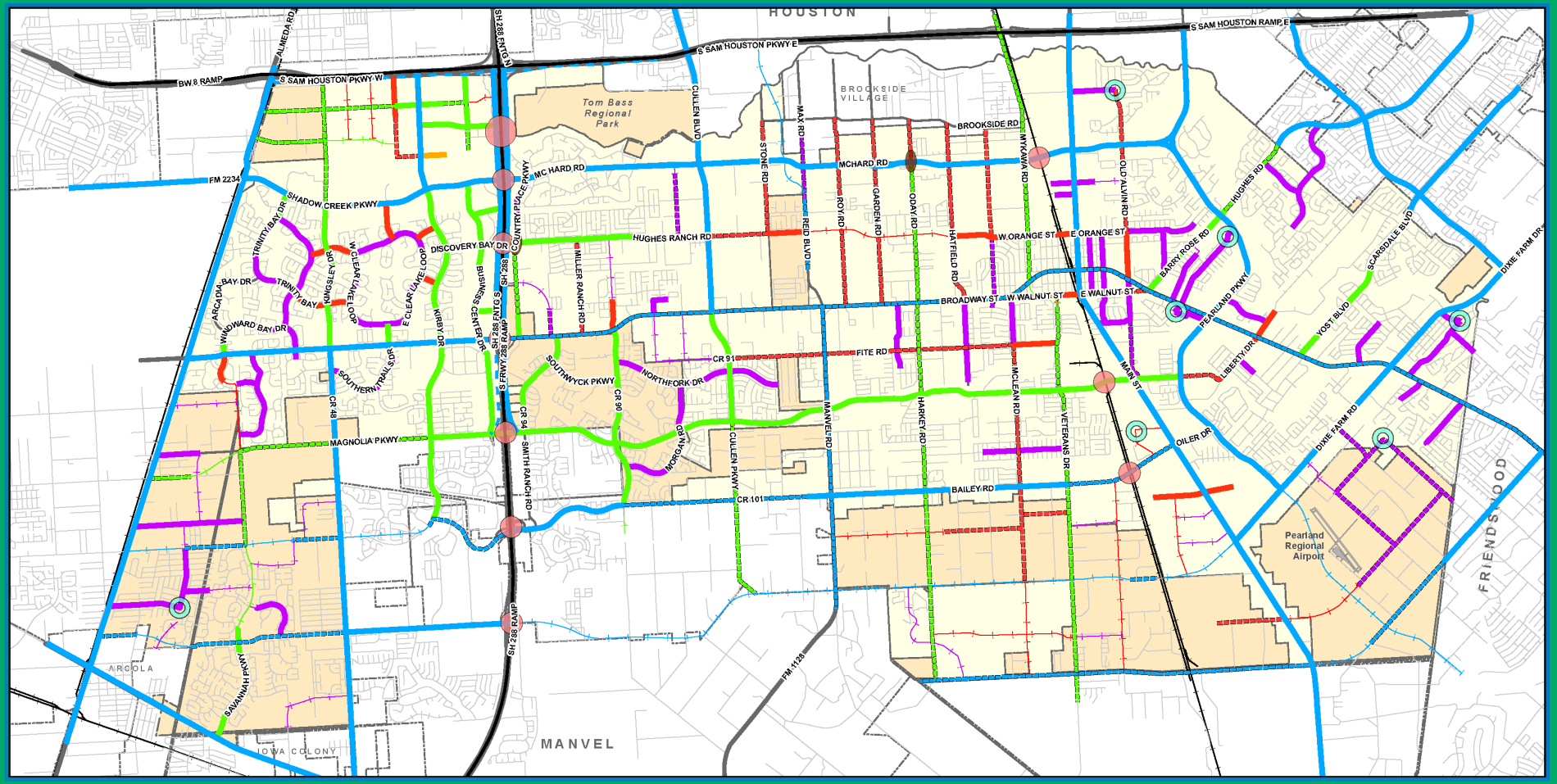
- Is a long range (50+ years) planning tool
- Preserves right-of-way for future transportation infrastructure
- Identifies approximate alignment, classification of future roadways, and typical cross-sections
- Coordinates with neighboring counties
- Gathers input from the general public and community stakeholders

A Thoroughfare Plan Does Not:



- Change ownership of land use
- Require agencies/local government to build any roadway project
- Prioritize roadway projects
- Include survey, design, cost estimate or schedule of any roadway project
- Develop a plan for funding any specific roadway project

Existing Thoroughfare Plan



CITY OF PEARLAND
THOROUGHFARE PLAN

Plan Approved: 9 AUG 2021
(Ord 1517-4)

120' Minimum ROW
- Major Thoroughfares - Sufficient Width
- Major Thoroughfares - To Be Widened
- Major Thoroughfares - To Be Acquired
- Major Thoroughfares - Proposed Frontage Road
- Freeway

100' Minimum ROW
- Secondary Thoroughfares - Sufficient Width
- Secondary Thoroughfares - To Be Widened
- Secondary Thoroughfares - To Be Acquired

Other
- Local Road - Special Designation

80' Minimum ROW
- Major Collector Streets - Sufficient Width
- Major Collector Streets - To Be Widened
- Major Collector Streets - To Be Acquired

60' Minimum ROW
- Minor Collector Streets - Sufficient Width
- Minor Collector Streets - To Be Widened
- Minor Collector Streets - To Be Acquired

- Proposed Grade Separation
- 15:1 R.O.W. Transition
- Collector Streets
- Street intersect at a right angle as part of a T or 4-way intersection
- Pearland City Limits
- Pearland ETJ

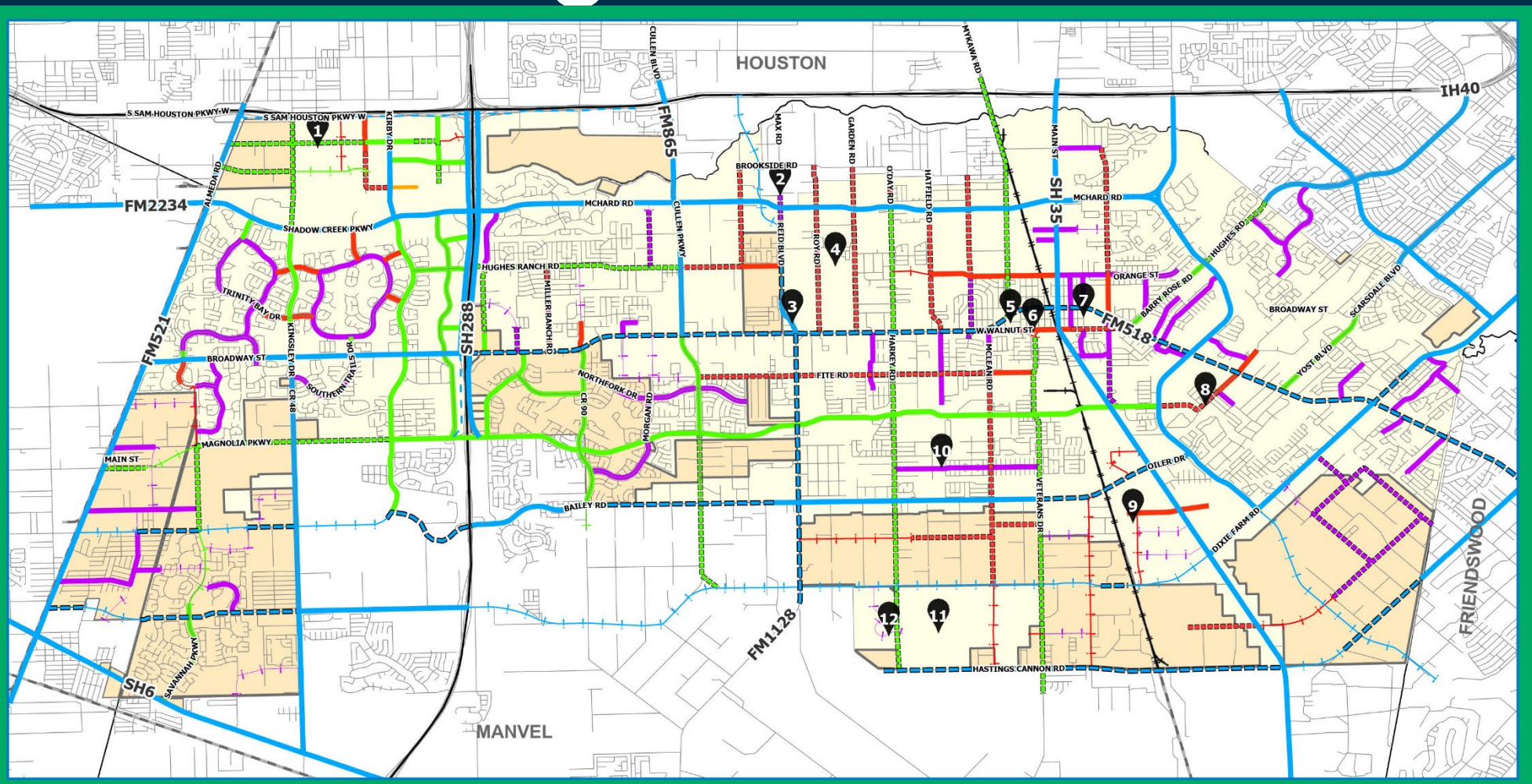
1 inch = 1 miles
0 0.5 1
Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: MAY 2023
CITY OF PEARLAND IT-GIS DEPARTMENT

Houston-Galveston Area Council

Updated Thoroughfare Plan



CITY OF PEARLAND

THOROUGHFARE PLAN

Plan Approved: XX Month 2025
(Ord xxx-x)

120' Minimum ROW

- Major Thoroughfares - Sufficient Width
- Major Thoroughfares - To Be Widened
- Major Thoroughfares - To Be Acquired
- Major Thoroughfares - Proposed Frontage Road
- Freeway

100' Minimum ROW

- Secondary Thoroughfares - Sufficient Width
- Secondary Thoroughfares - To Be Widened
- Secondary Thoroughfares - To Be Acquired

Other

- Local Road - Special Designation

80' Minimum ROW

- Major Collector Streets - Sufficient Width
- Major Collector Streets - To Be Widened
- Major Collector Streets - To Be Acquired

60' Minimum ROW

- Minor Collector Streets - Sufficient Width
- Minor Collector Streets - To Be Widened
- Minor Collector Streets - To Be Widened

1 inch = 1 mile

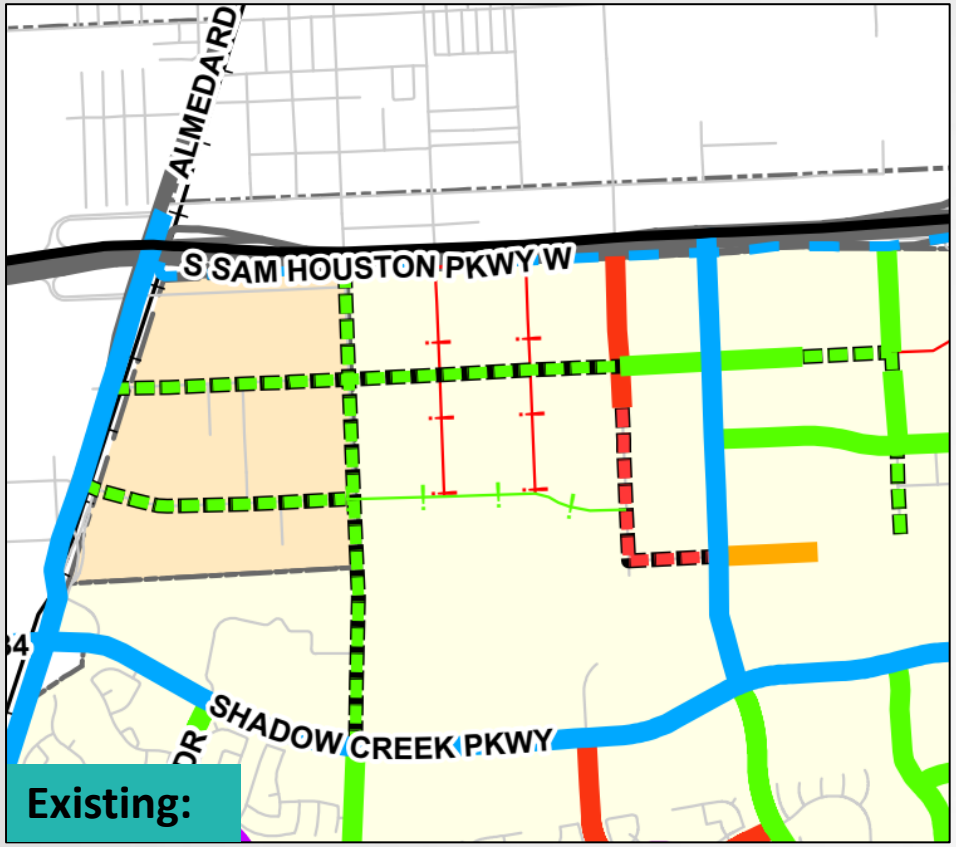
0 0.8 1.5
Miles

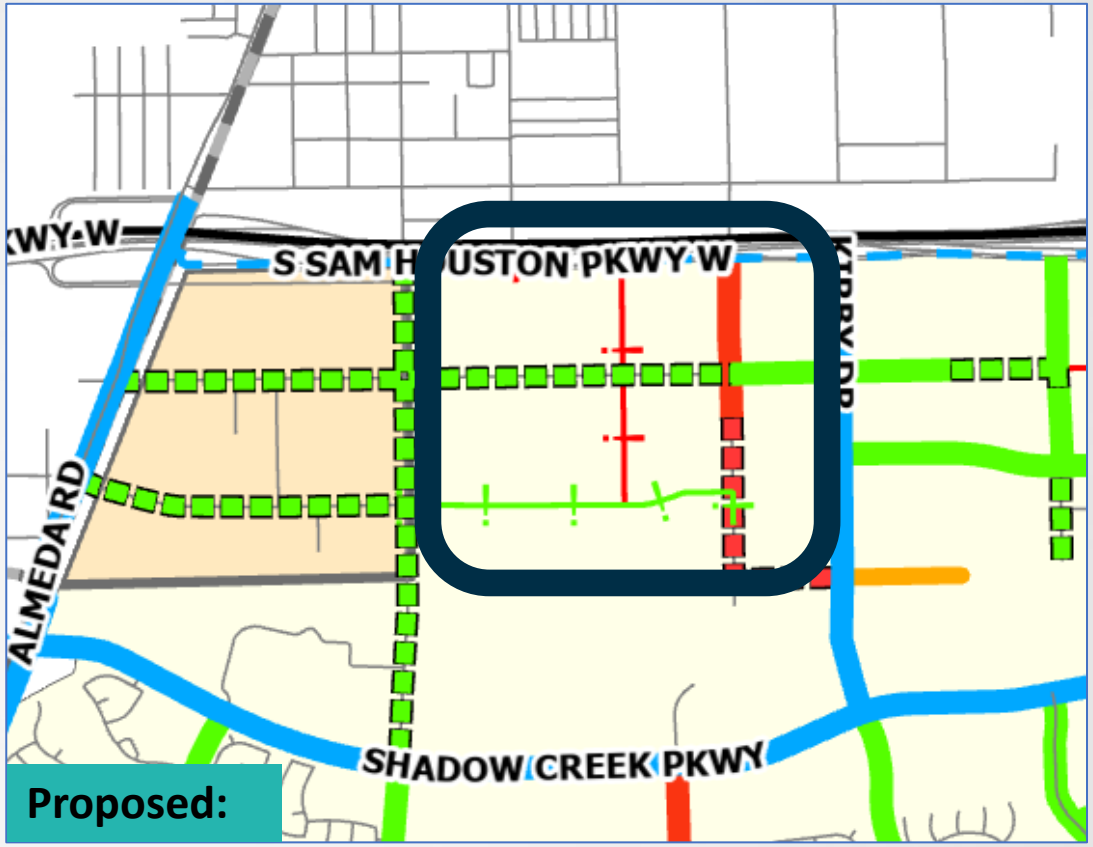
This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED February 2025
Kimley - Horn

Houston-Galveston Area Council

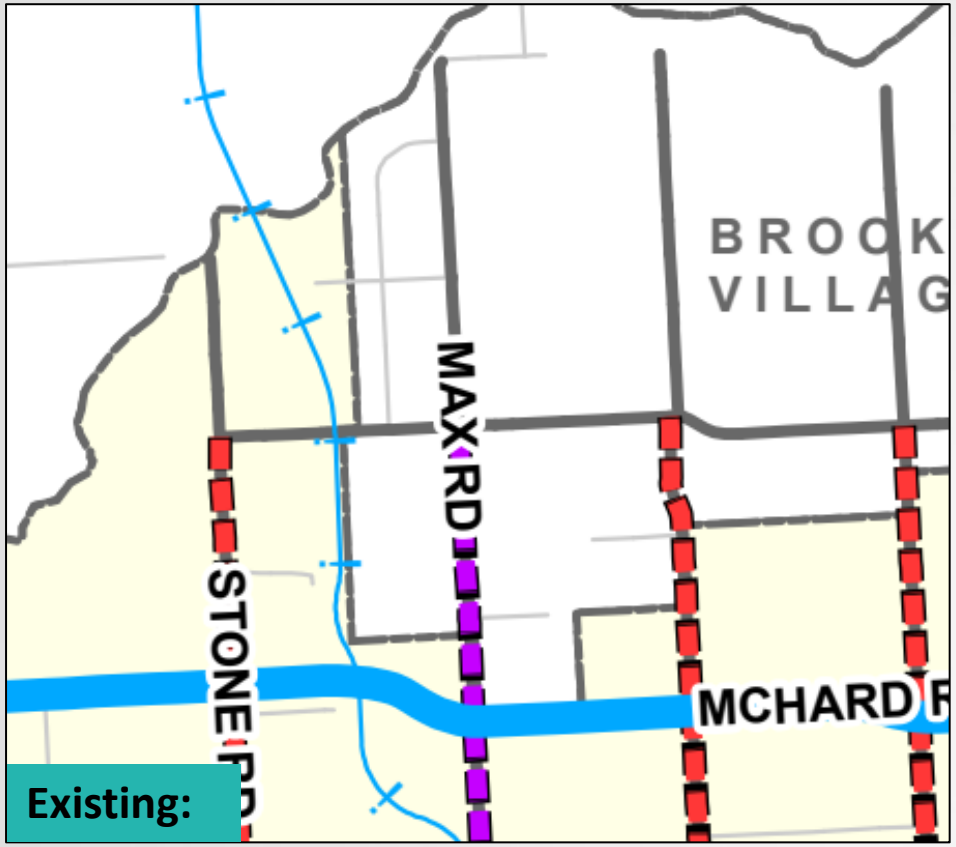
Update 1: Lower Kirby Area

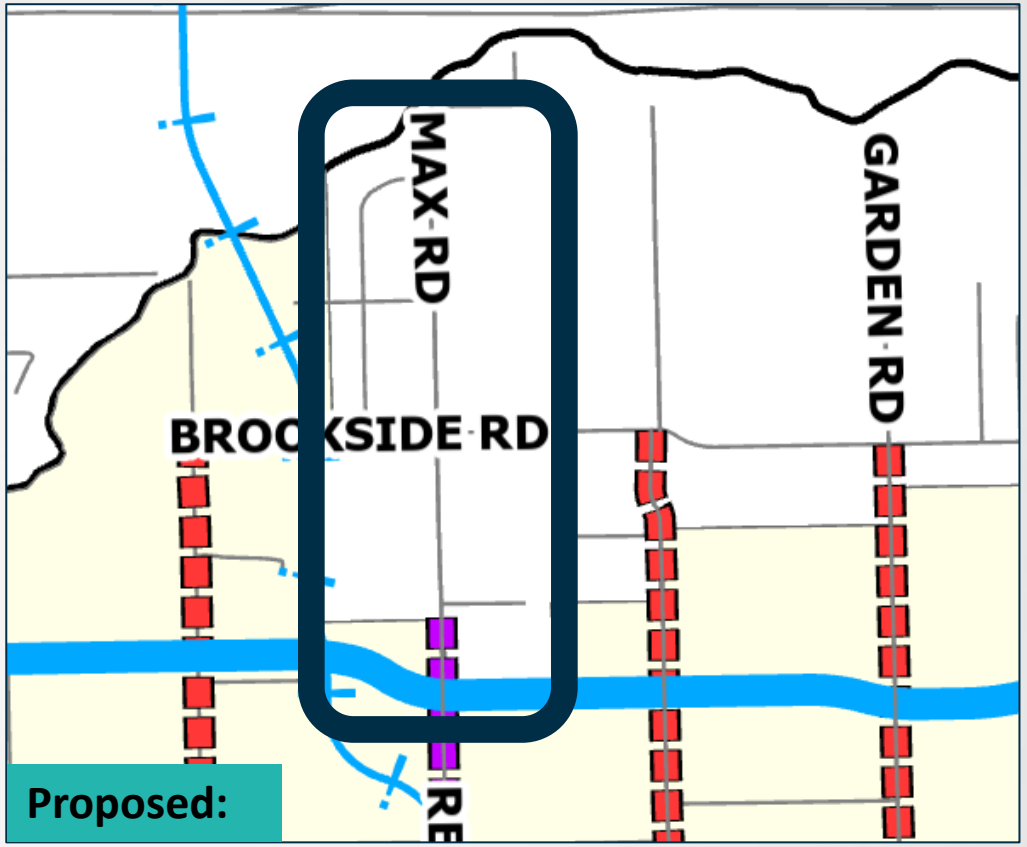




Removed one of the two N-S Major Collectors (– To Be Acquired) connecting Sam Houston Pkwy to the E-W Secondary Thoroughfare

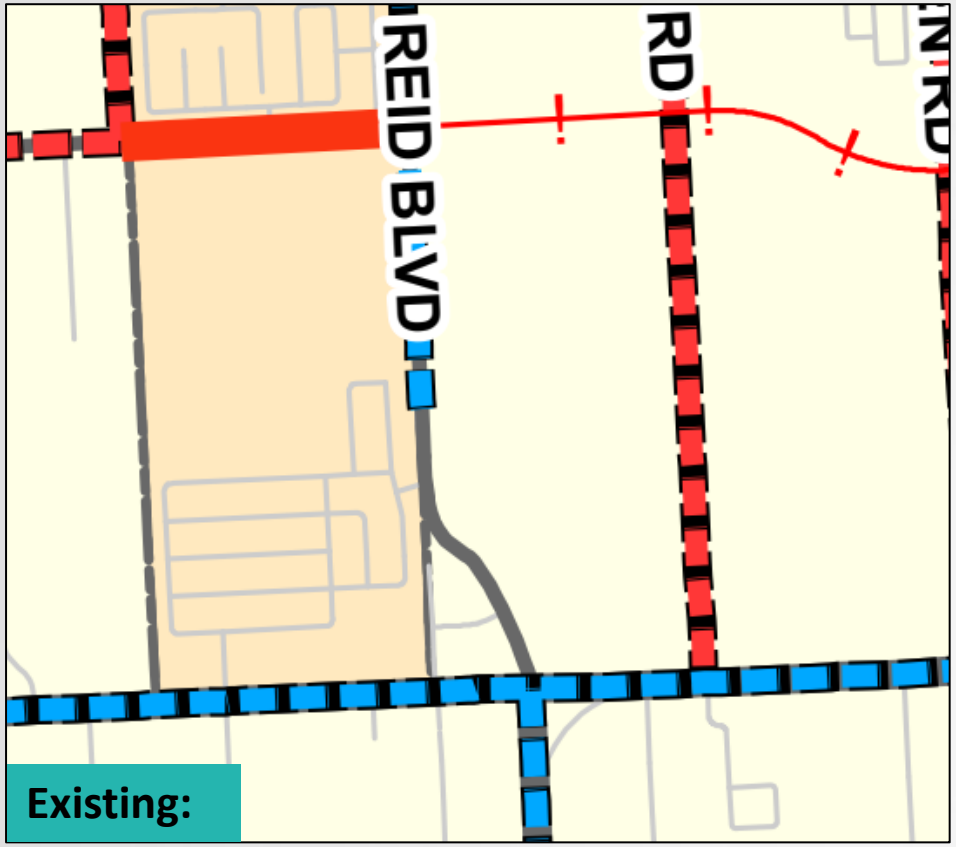
Update 2: Max Rd

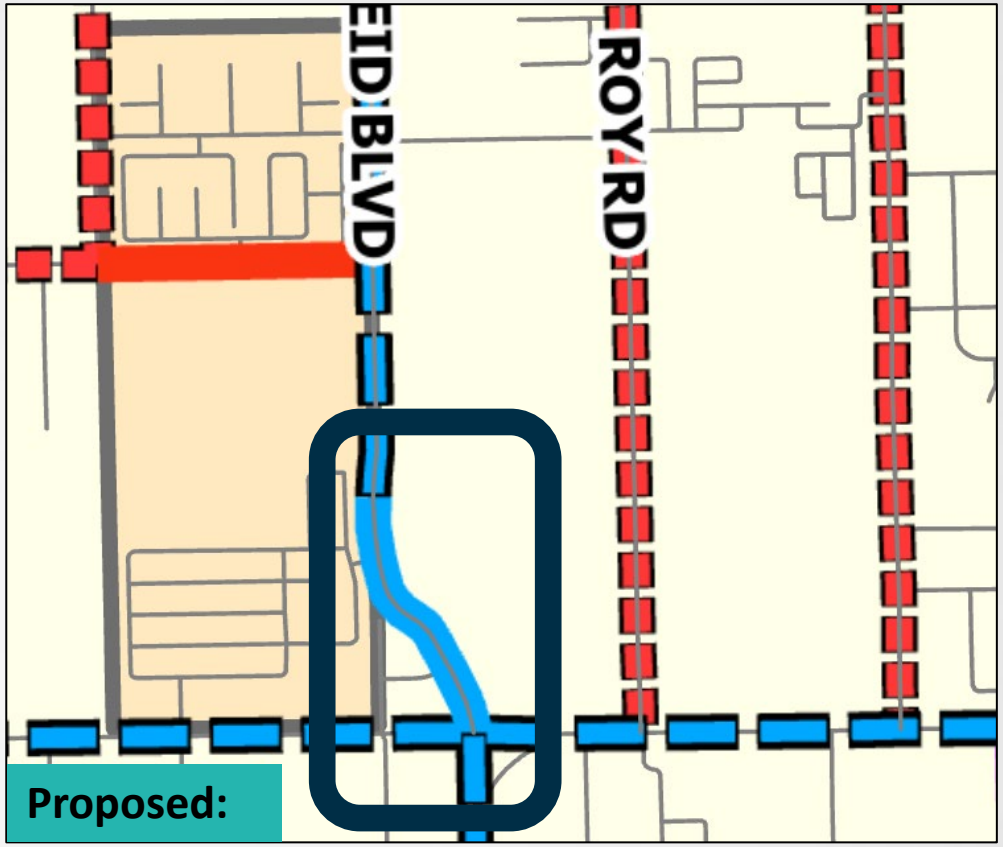




Removed the Max Rd segment (Minor Collector –To Be Widened)

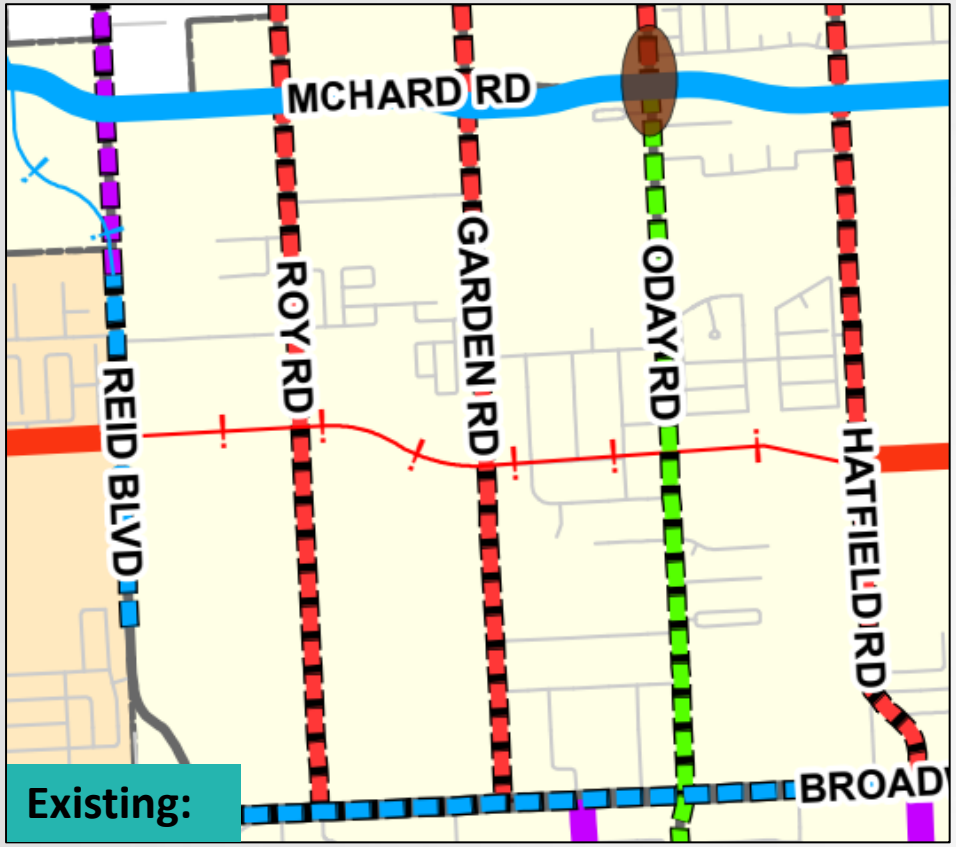
Update 3: Reid Blvd

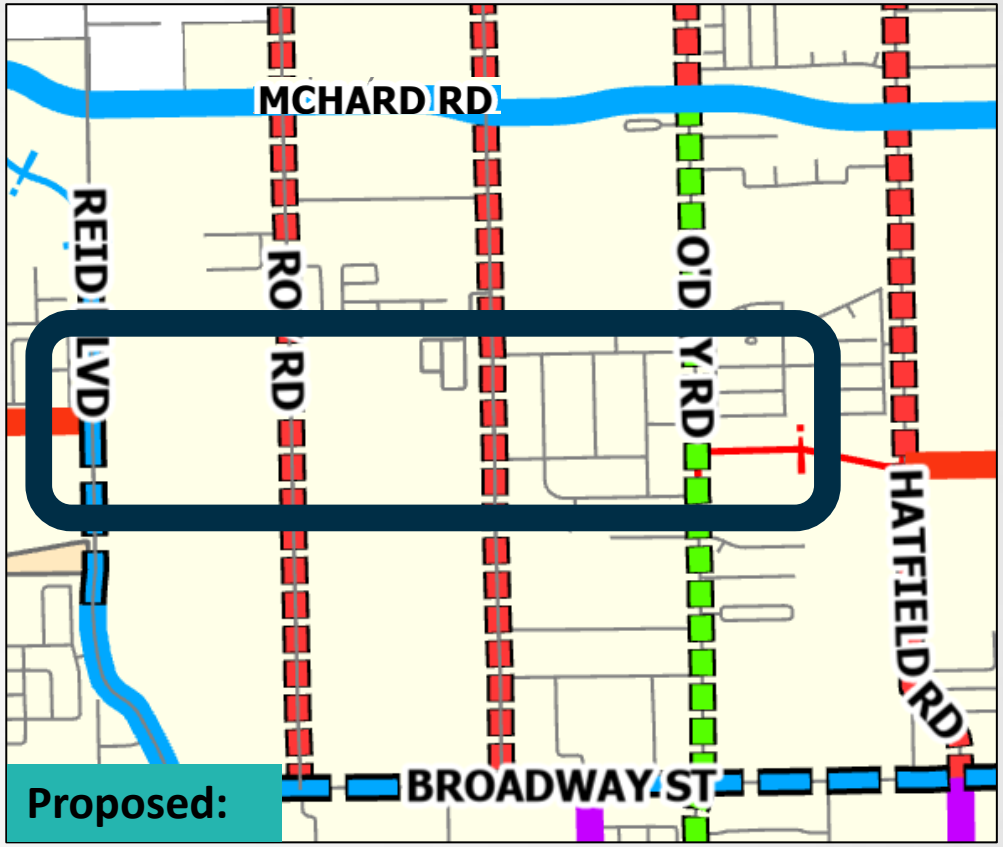




Added the segment of Reid Blvd connecting Broadway Street, as Major Thoroughfare (- Sufficient Width)

Update 4: Hughes Ranch Rd to W. Orange St

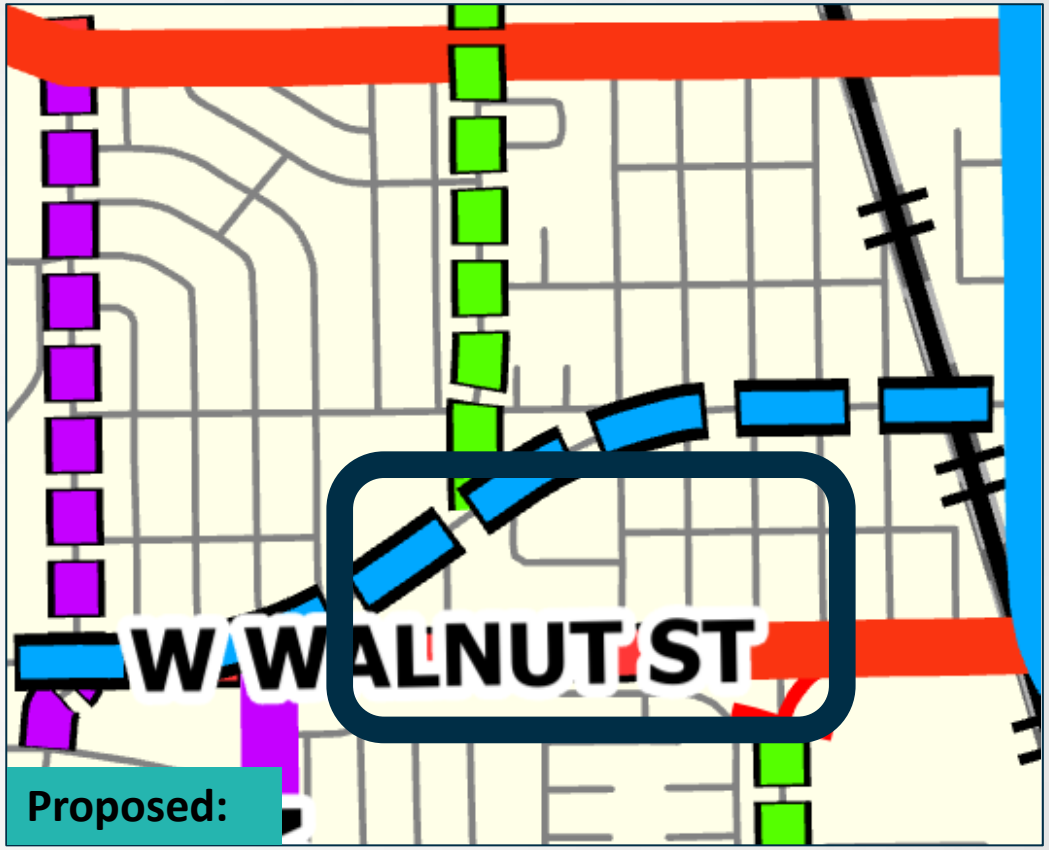




Removed the segment Major Collector (- To Be Acquired) between Reid Blvd and O'Day Rd

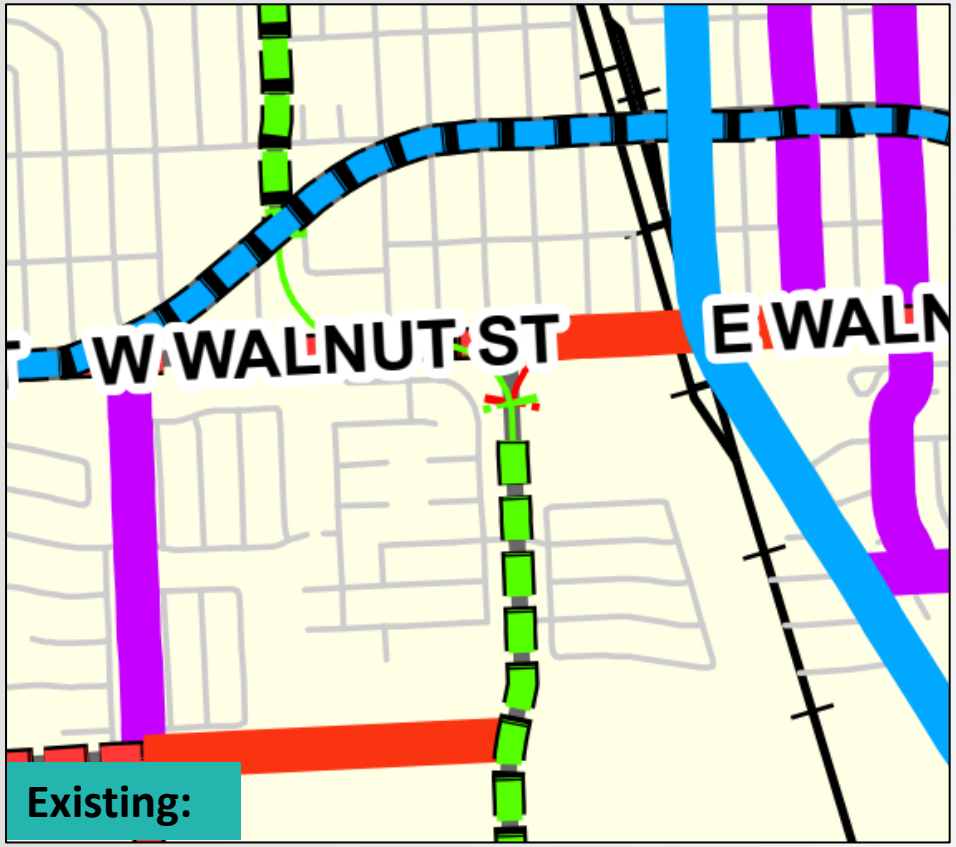
Update 5: Mykawa Rd

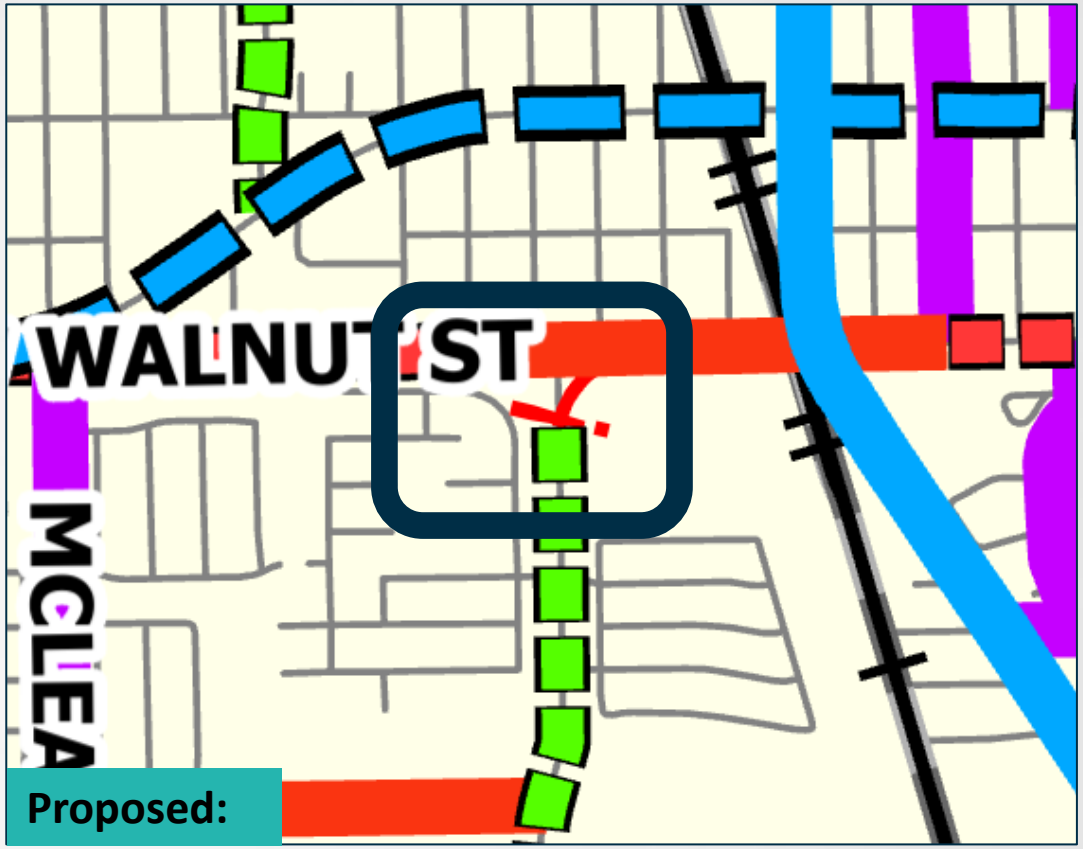




Removed the S-curve Secondary Thoroughfare (- To Be Acquired) due to the S-Curve's challenging roadway geometry

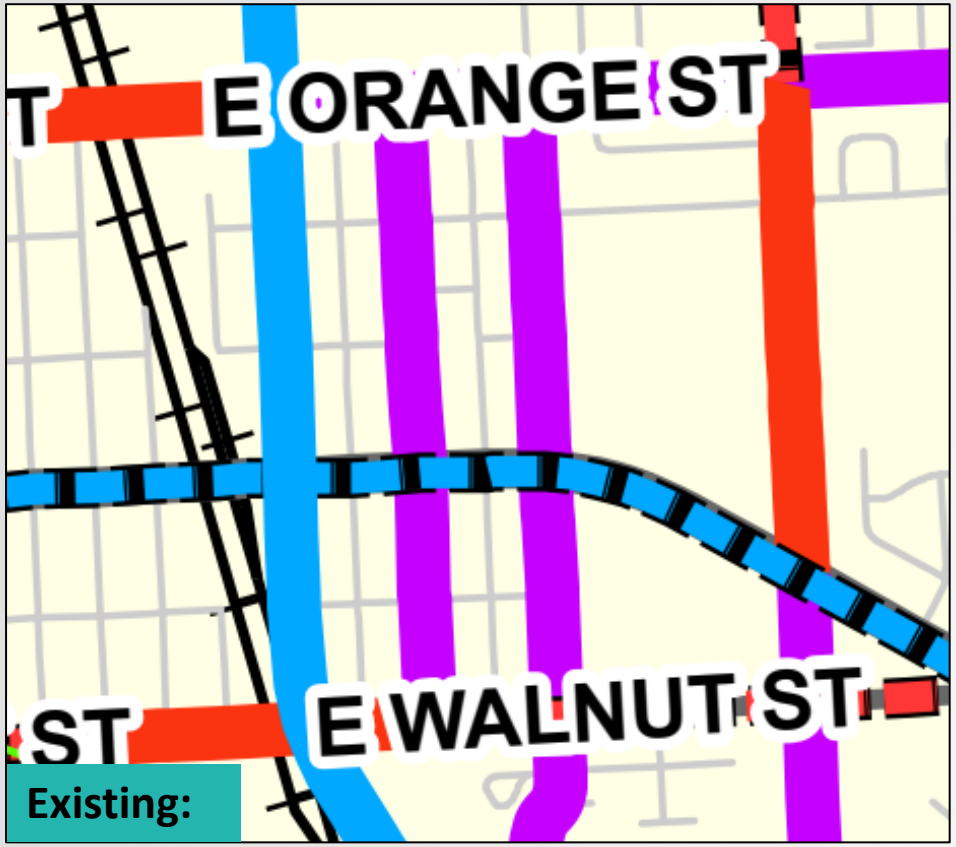
Update 6: Veterans Dr and Walnut Street Connection

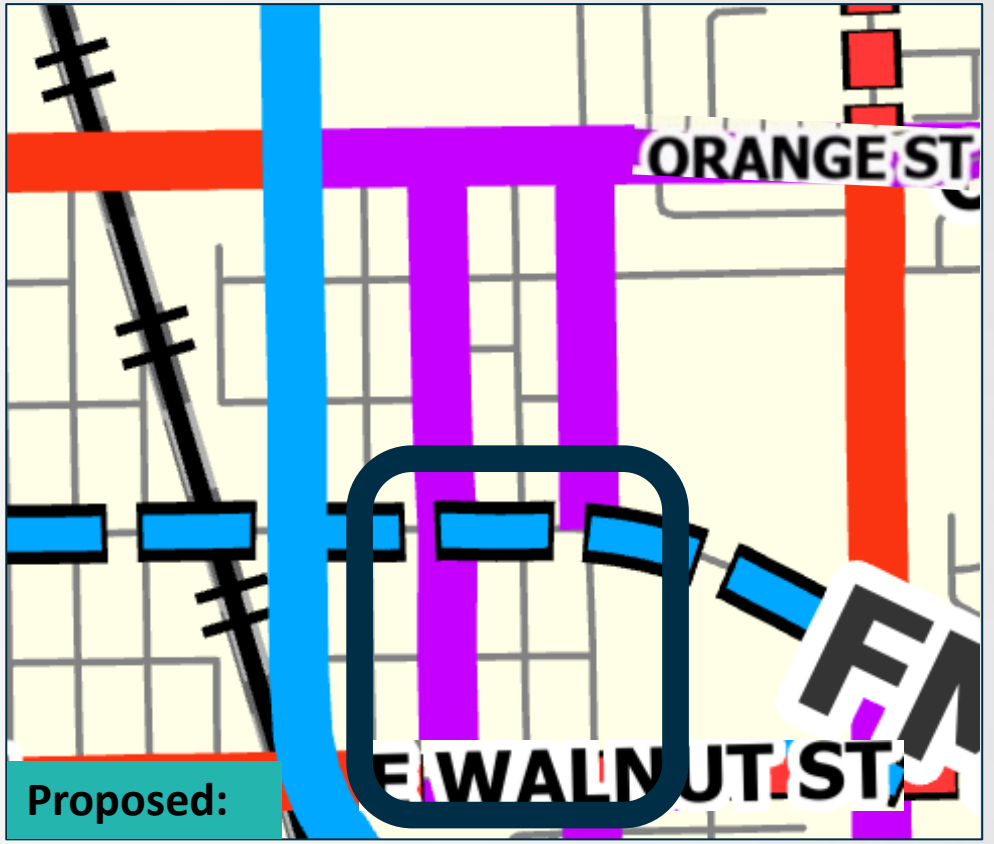




Removed the left-turn segment (Minor Thoroughfare – To Be Acquired) from Veterans Dr, following the removal of the S-Curve alignment on Update 5.

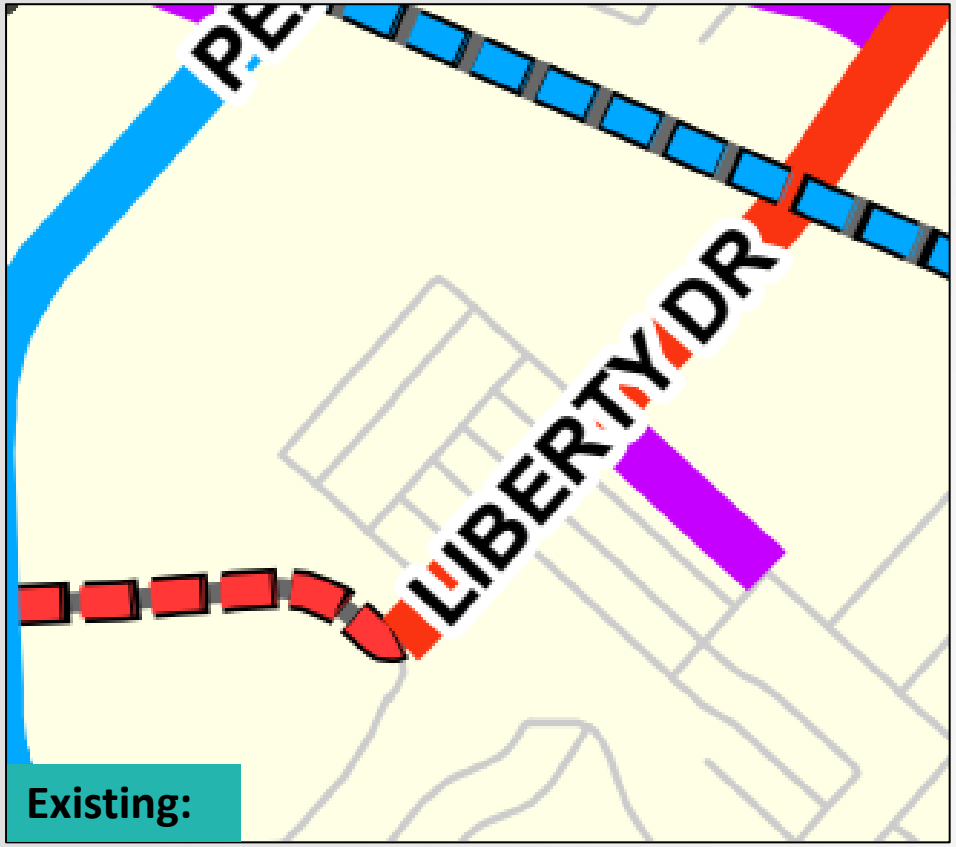
Update 7: Galveston Ave



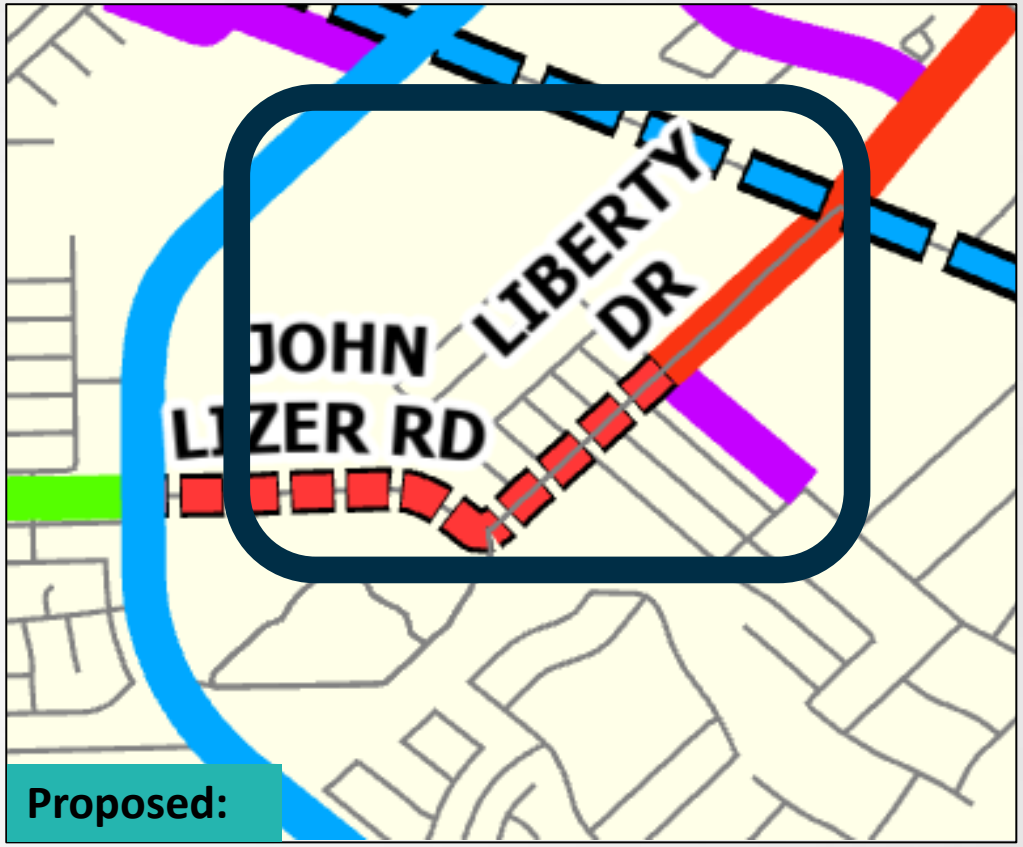


Removed the S. Galveston Ave segment (Minor Collector – Sufficient Width), between FM 518 and E. Walnut St, this segment will be a local street. There are plans to permit on-street parking.

Update 8: John Lizer Rd to Liberty Dr



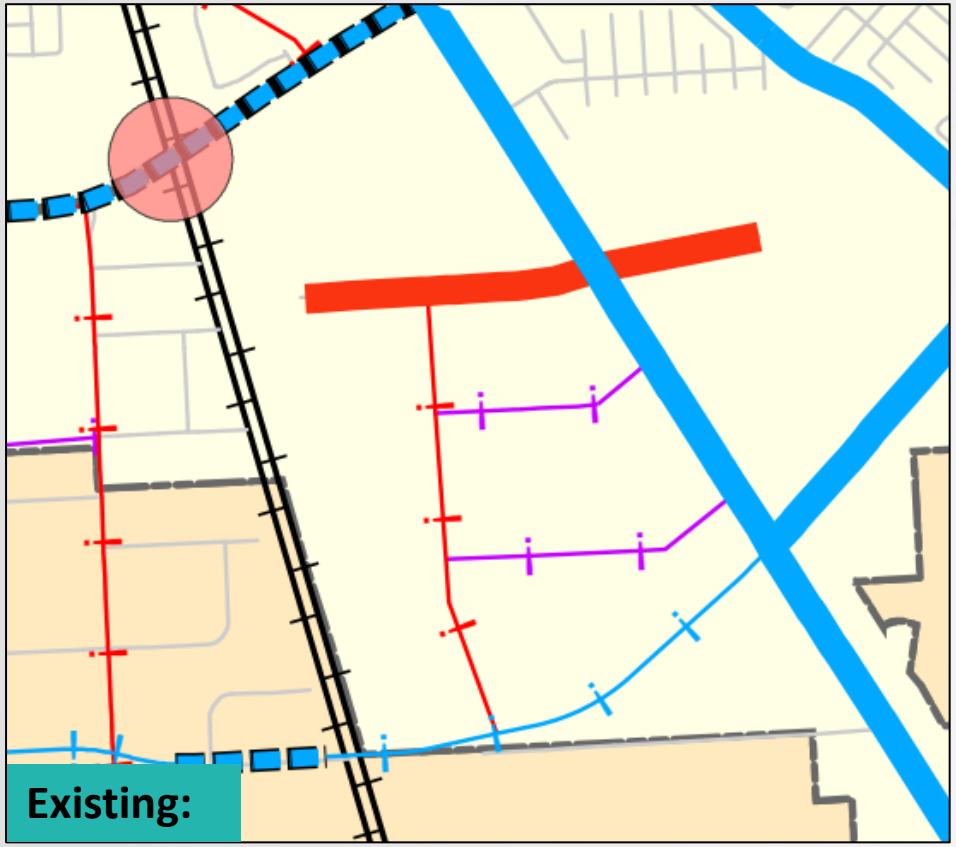
Existing:

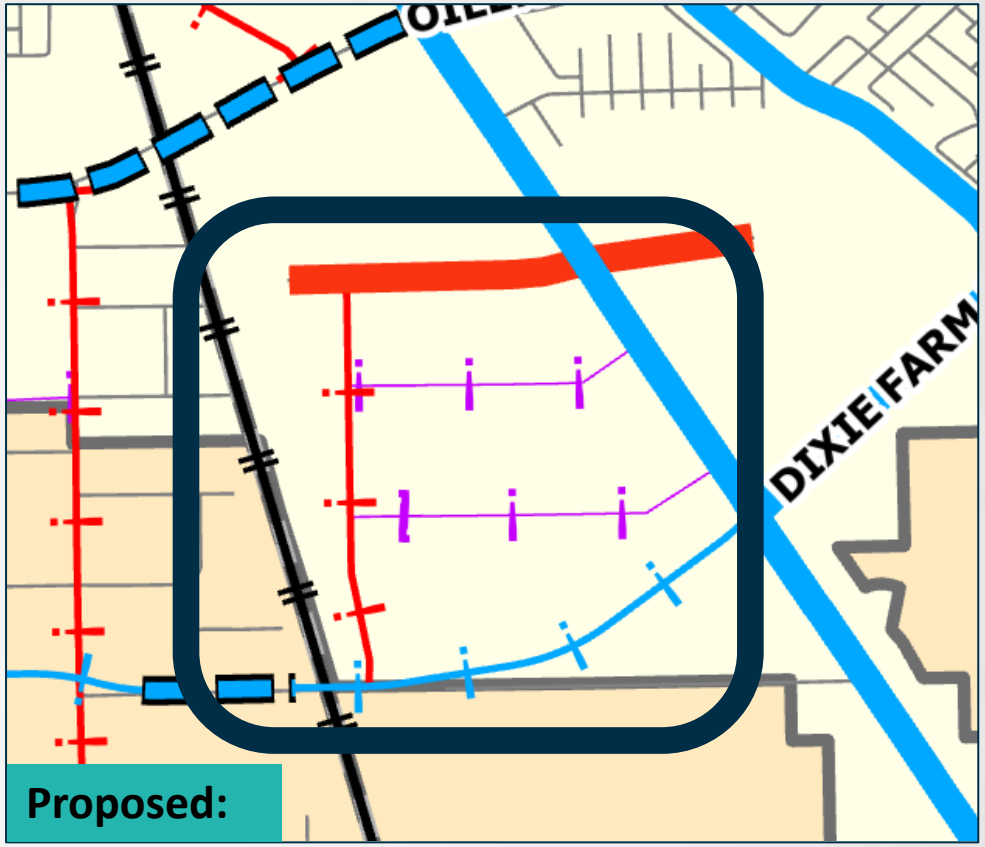


Proposed:

Changed the segment of Liberty Dr (Major Collector – Sufficient Width), from John Lizer Rd to Shady Bend Dr. to Major Collector — To Be Widened

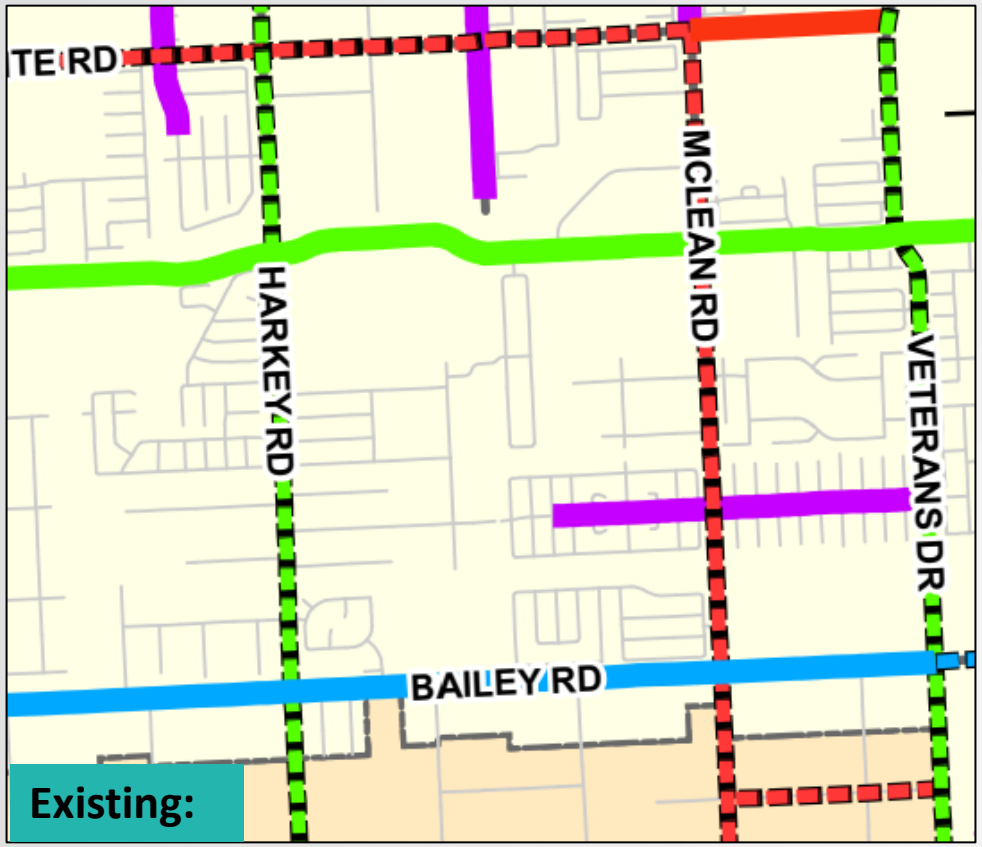
Update 9: Alexander Development Area

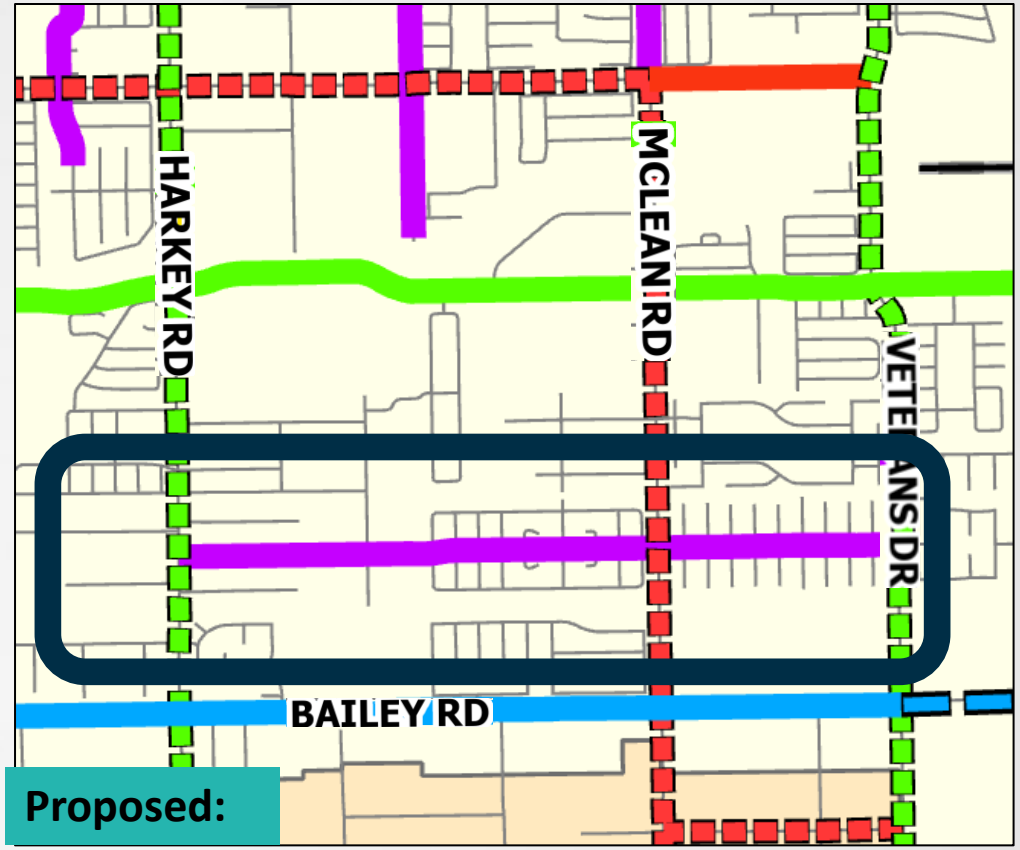




Shifted the alignment of the N-S Major Collector Street (- To Be Acquired) and the connecting E-W Minor Collectors (– To Be Acquired)

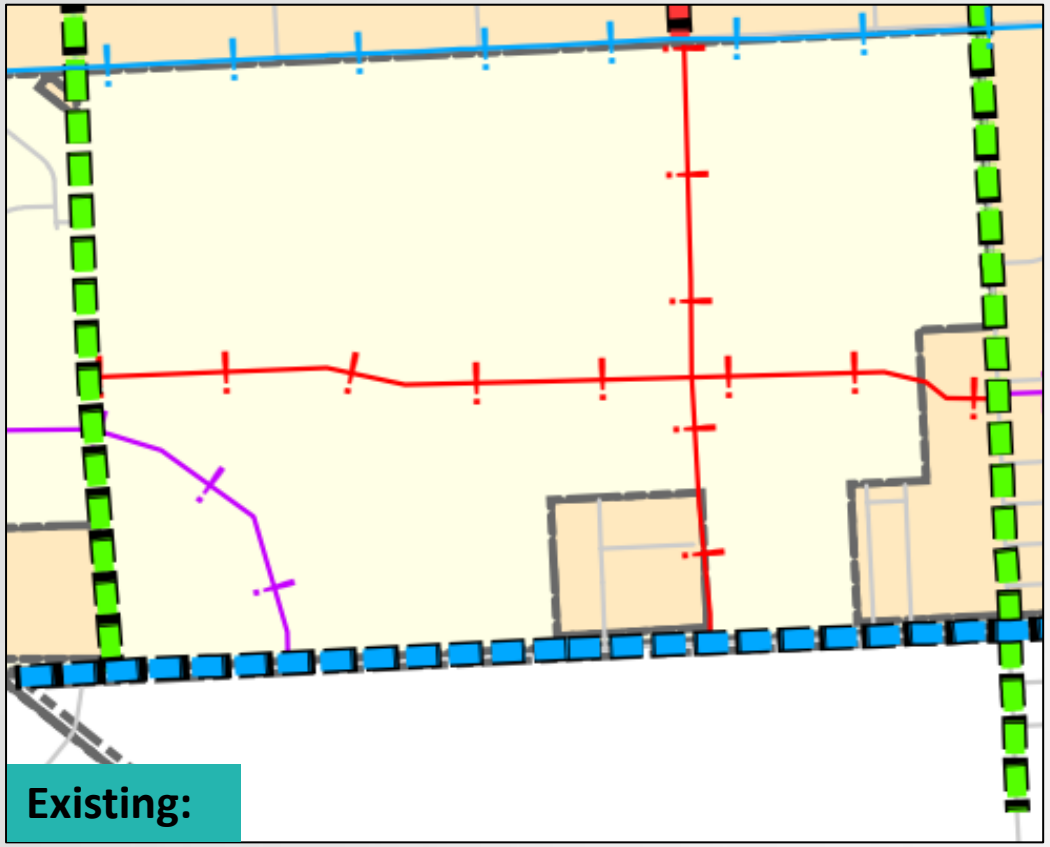
Update 10: Springfield Ave



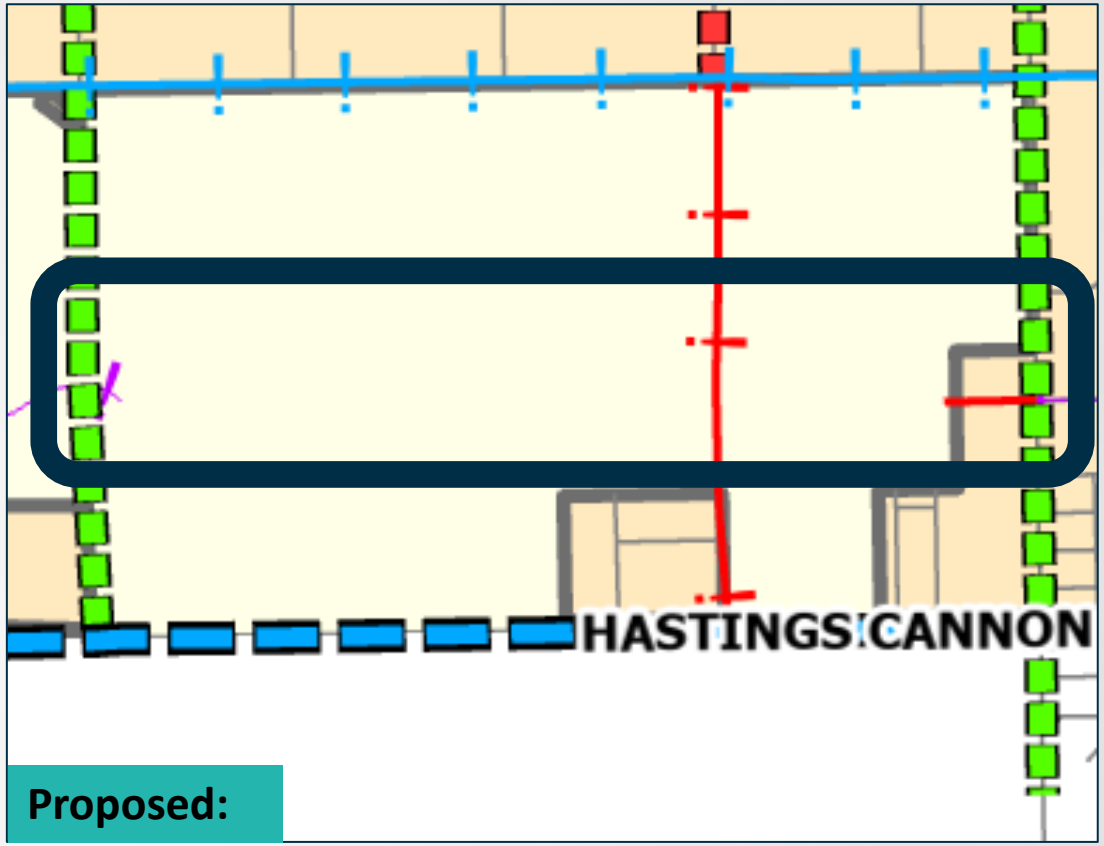


Added the segment of Spring Valley Ave from Spring Meadow Dr to Harkey Rd, as Minor Collector – Sufficient Width

Update 11: Massey Oak Subdivision East Adjacent Area



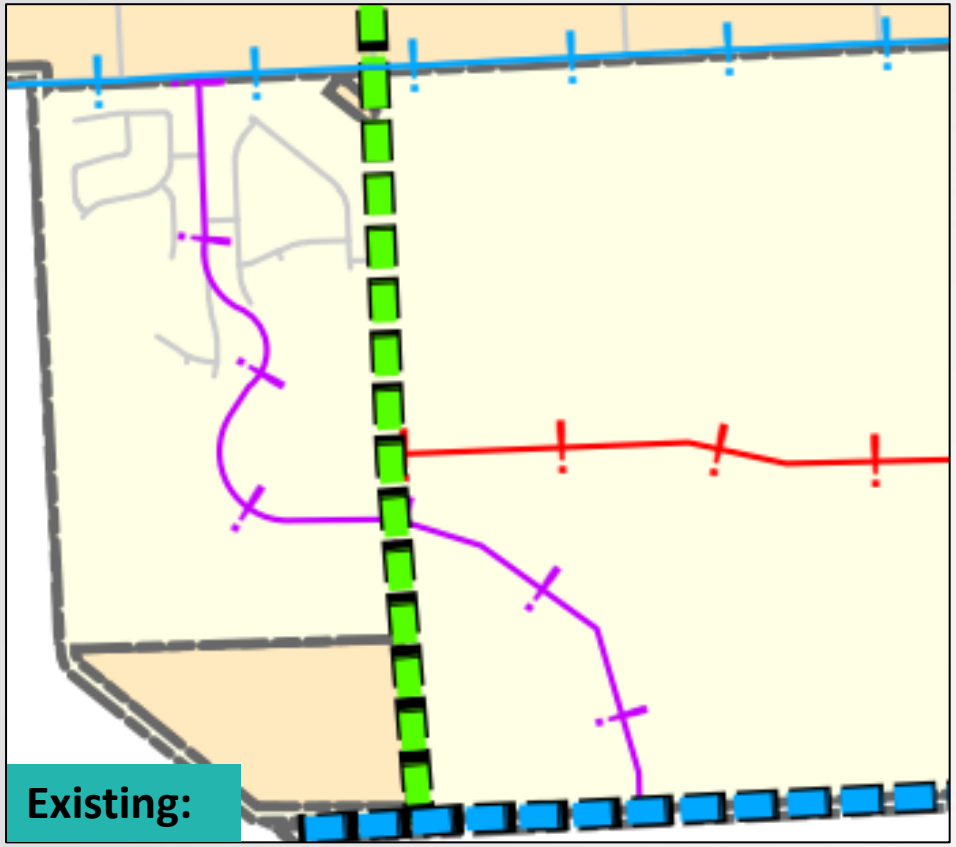
Existing:

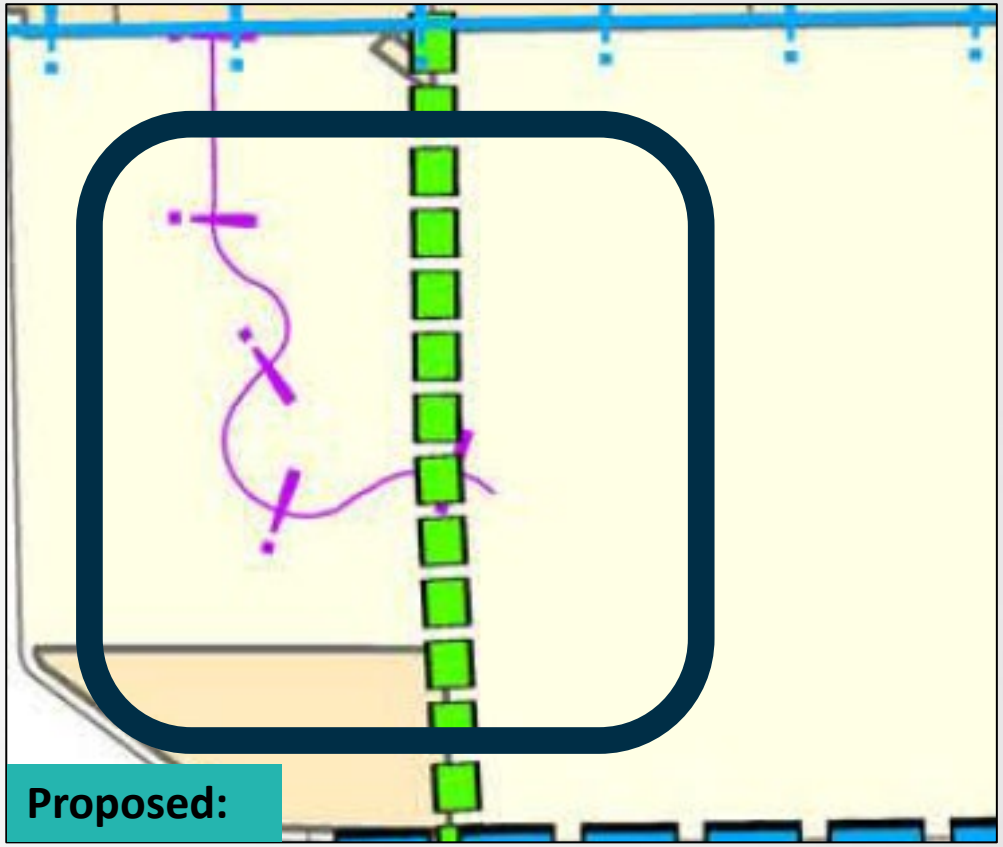


Proposed:

Removed the E-W Major Collector (- To Be Acquired) between McLean Rd extension and Harkey Rd

Update 12: Massey Oak Subdivision





Changed the alignment of the Minor Collector Streets (- To Be Acquired) to follow the recorded Massey Oaks Subdivision Plat



Project Prioritization

Prioritization Matrix

Category	Points	Criteria	Performance Measure	Score
Safety	15	Critical Crash Locations	Project location includes roadway segments or intersections with fatalities or crashes with serious injuries	15
			Project Location includes roadway segments or intersections that have a history of non-fatal or serious injury crashes	10
			Project Location includes roadway segments or intersections with minimal to no history of crashes	0
	25	Safety Enhancements	Project Improves Sight Distance	5
			Project adds Traffic Calming Improvements	5
			Project adds Access Management	5
			Project adds Traffic Channelization	5
			Project provides Protective Turning Movements	5
Reliability	15	Reduce V/C	The project reduces future roadway V/C Ratio by greater than 0.25	15
			Project reduces the future roadway V/C by more than 0.15 but less than 0.25	10
			Project improves the roadway greater than 0.05 but less than 0.15	5
	15	Improve Operation	The project connects corridors	5
			The Project removed major barriers	5
			Project improves Traffic Signal Technology(adjusting signal timing, adding emergency vehicle preemption, or incorporating flashing yellow arrow)	5
Mobility	5	Bicycle Mobility	Project will add bike connectivity to the network	5
	5	Pedestrian Mobility	Project will add pedestrian connectivity to the network	5
Project Readiness	5	ROW Concerns	No Additional ROW necessary	5
			ROW needed	0
	5	Jurisdictional Coordination	Project completely within COP	5
	5	Coordinated Effort	Project can be coordinated with other infrastructure projects for improved efficiency of construction.	5
	5	Funding Opportunity	Project is eligible for potential funding (federal, state, or local)	5

Sample Project Scoring

Project:	John Lizer Road Widening from Pearland Parkway to Liberty Dr.			
Project Summary:	Project will improve the existing two-lane, two-way road with roadside drainage to four lane curb and gutter road with sidewalks			
Category	**Max Points**	**Criteria**	**Project Description**	**Score**
Safety	15	Critical Crash Locations	John Lizer at Pearland Parkway has some history of crashes	10
	25	Safety Enhancements	Project Chanelizes the roadway by removing roadside ditches and adding curb and gutter.	5
			Project provides protected turning movements	5
Reliability	15	Reduce V/C	Project reduces V/C by 0.15 (Assumed)	10
	15	Improve Operation	Project adds additional Capacity	5
			Project adds Traffic Signal Technology	5
Mobility	5	Bicycle Mobility	Project will add bike connectivity to the network	5
	5	Pedestrian Mobility	Project will add pedestrian connectivity to the network	5
Project Rediness	5	ROW Concerns	ROW Needed	0
	5	Jurisdictional Coordination	Project Completely within COP	5
	5	Coordinated Effort	Project can be coordinated with a drainage project	5
	5	Funding Opportunity	Project eligible for potential funding (Federal, State, Local)	5

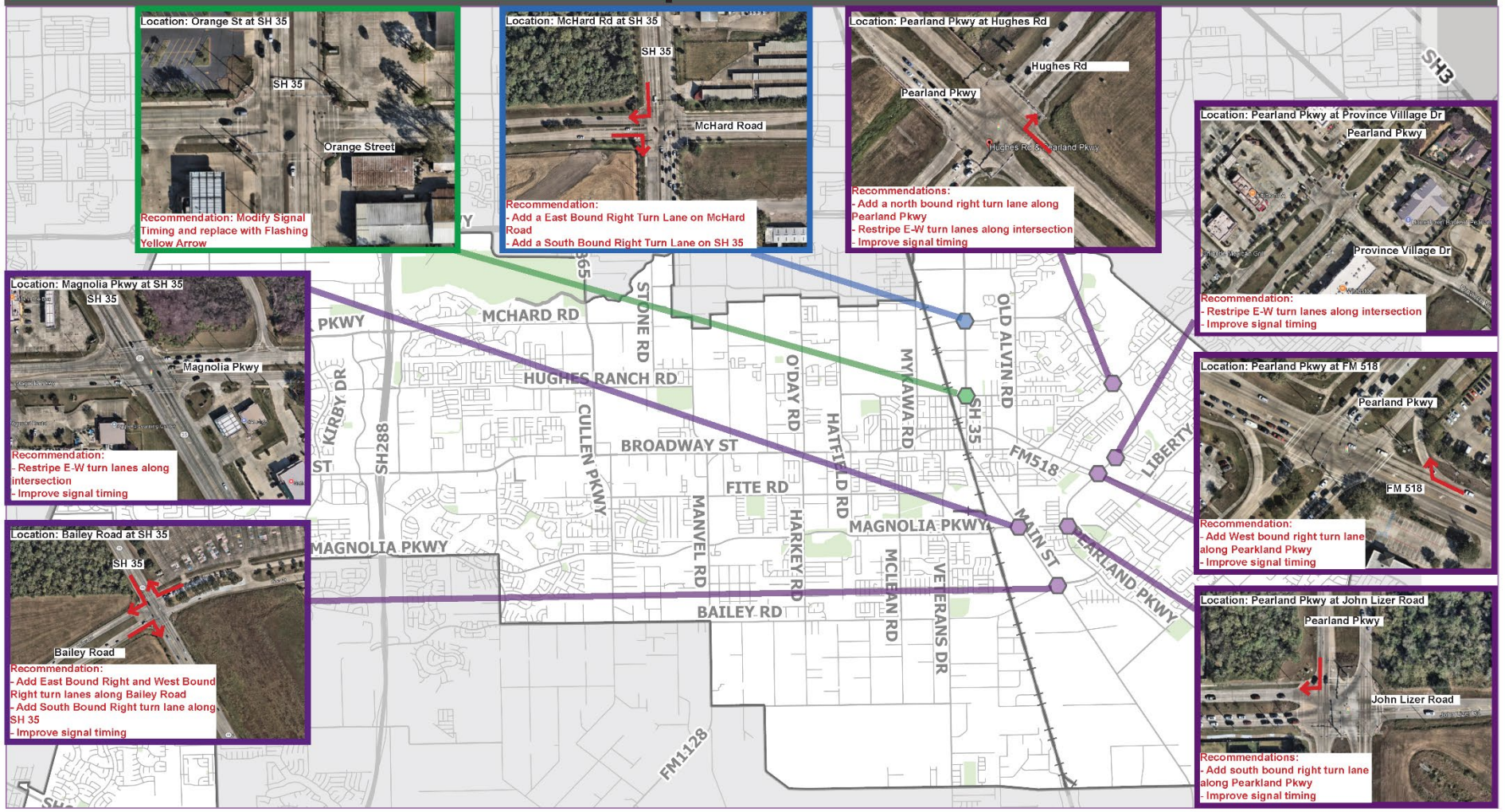


Previously Shared Recommendations

Proposed Short-Term Intersection Improvements

Pearland Mobility Study

Traffic counts were collected and analyzed for over 60 City intersections in order to develop the recommended improvements. The Proposed Short-term (0-5 years) intersection improvements aim to improve traffic flow and traffic safety at existing intersections.

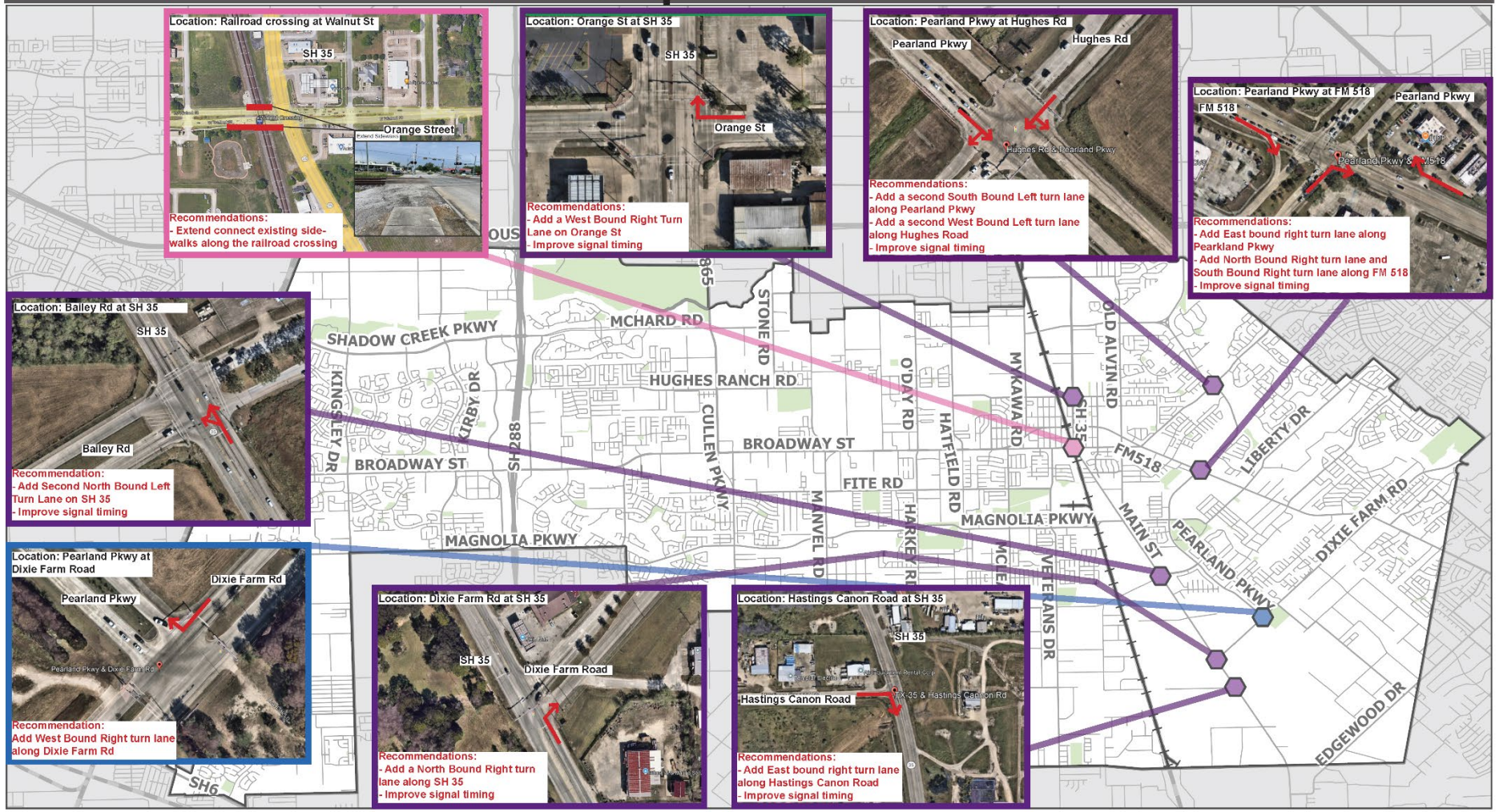


Houston-Galveston Area Council

Proposed Medium-Term Intersection Improvements

Pearland Mobility Study

Traffic counts were collected and analyzed for over 60 City intersections in order to develop the recommended improvements. The Proposed Medium-term (6-10 years) intersection improvements aim to improve traffic flow and traffic safety at existing intersections.



Houston-Galveston Area Council

Proposed Pedestrian Infrastructure Improvements

Pearland Mobility Study

Building off of the Pearland 2021 Multi-modal Master Plan and public engagement feedback received at the beginning of this project, a variety of pedestrian infrastructure improvements are being recommended.



Houston-Galveston Area Council

Proposed Safety Improvements at High-Injury Locations

Pearland Mobility Study

In addition to the short-term and medium-term recommendations, a set of safety improvements have been recommended after the project team looked at the conditions of the existing High-Injury network within Pearland. The High-Injury Network examined 7-years of crash data between 2017 - 2023.



Houston-Galveston Area Council

Proposed City-Wide Improvements

Pearland Mobility Study

Along with the location specific recommendations, a list of holistic recommendations for Pearland's mobility network is listed below, ranging from system wide technology improvements to long-term mobility planning.



Traffic Technology Improvements

Recommendations to expand the list of equipments at all traffic signals:

- Left-turn Flashing Yellow Arrow Displays
- Radar vehicle detection
- Battery Back-up Units
- Signal Communication (Fiber or Wireless)
- CCTV Cameras
- Accessible Pedestrian Signal (APS) Units
- Emergency Preemption Equipment

Recommendations for traffic systems:

- Leading Pedestrian Interval (LPI)
- Update Central Control System
- Coordinated Signal Timing Plans
- Staff Traffic Management Center
- Advanced Traffic Signal Performance Measures (ATSPMs)
- Arterial Dynamic Message Signs

Emerging Traffic Technology Improvements

Recommendations for long-term technology related improvements:

- ITS Master Plan for the City
- Autonomous & Connected Vehicle (A/CV) Framework
- Regional Transportation Systems Management & Operations (TSMO)



Long-Term Recommendations (11+ Years)

Thoroughfare Plan Updates along with updated travel demand modeling results. In conjunction with the pedestrian infrastructure improvements, it is recommended that John Lizer Road, from Pearland Pkwy to Shady Bend Dr be widened up to 4 lanes.



Americans with Disabilities Act (ADA) Transition Plan

Based on the Americans with Disabilities Act (ADA) – Civil Rights Law: Title II, it is recommended that the City follow the following administrative requirements:

- Completion of a Self-Evaluation
- Development of ADA complaint procedure
- Designation of 1 person to oversee Title II compliance
- Develop ADA Transition Plan to schedule removal of barriers uncovered by 'Self Evaluation' process



Houston-Galveston Area Council

Next Steps



- Finalize Draft Pearland Mobility Report
- Present Thoroughfare Plan Update and Pearland Mobility Study at City Council




Thank You!




Regional Collaboration • Transportation Planning • Multimodal Mobility

H-GAC
Houston-Galveston Area Council

Questions?



- Qun Zhao – H-GAC Project Manager

  Qun.Zhao@h-gac.com

  832-681-2580

- Carlene Mullins – H-GAC Deputy Project Planner

  Carlene.Mullins@h-gac.com

  832-681-2585

Pearland Mobility Study
March 18, 2024, 3:00 PM
Pearland Chamber of Commerce
6117 Broadway St, Pearland, TX 77581
Stakeholder Meeting #1 Summary

Attendees:

Organization	Attendee	Organization
Stakeholder Group Members	Qun Zhao	H-GAC
	Rodney Sigua	H-GAC
	Jim Johnson	Pearland Chamber of Commerce
	Matt Buchanan	Pearland Economic Development Corporation
	Larry Berger	Pearland ISD
	Carol Nelson	Alvin ISD
	Liz Sitta	Brazoria County Commissioner Precinct 3
	Alexander Okwonna	San Jacinto College
	Matt Peno	CBL Pearland Town Center
	David Wagner	HCA Houston Healthcare Pearland
	Grif Carnes	Third Coast
	Paul Glenn	Third Coast
	Russ Wilkins	Frontier Forklifts
	Drew Dietrich	Addi Printing
	Sandy Cavazos	A-Better Plumbing
	Craig Slater	Farmers Insurance Agency
Consultants	Michael Feeney	Kimley-Horn
	Vivek Deshpande	Kimley-Horn
	Jenny Lai	Kimley-Horn

Meeting Overview

The first Pearland Mobility Study Stakeholder Group meeting was held at the Pearland Chamber of Commerce at 3 pm on March 18, 2024. This meeting had fourteen (14) Stakeholder Group members in attendance, two (2) members from the Study's sponsoring agency, Houston Galveston Area Council (H-GAC), and three (3) members from the prime Consultant, Kimley-Horn.

The meeting began with introductions of all the attendees, and a presentation on the project's background, goals, and year-long schedule. The Consultant team went over the upcoming in-person public engagement efforts, including the Pearland Spring Fest, in which the project team will be sharing a booth with another concurrent study, the FM 518 Corridor Study. The Consultant team shared the combined Study Survey (joint with the FM 518 Corridor Study) and the Budget Prioritization Activity with the Stakeholder Group, which will also be made available online via Engagement HQ ahead and after the Spring Fest to ensure a wider reach of study area's constituents' feedback can be gathered.

The Consultant team asked the Stakeholders to participate in the Survey and the Budget Prioritization Activity. After the engagement activities were wrapped up, the Stakeholders were requested to review map of existing conditions in Pearland specific to roadways and the bike & pedestrian paths and provide feedback on challenges and suggestions related to mobility within the City of Pearland. The Stakeholders broke out into four groups to discuss among themselves and provided comments and mark-ups on the maps. After the 30-45 minute discussion, each group shared their thoughts with everyone that led to a discussion within the larger group.

Results from the survey, the Budget Prioritization Activity, and key points from the existing conditions maps are summarized in the following sections.

Results from the Stakeholder Group

In the Budget Prioritization Activity, each Stakeholder member was handed a bag containing ten small puff balls, which represented a total of $10,000 (each puff ball being equivalent to $1,000). The Stakeholders were asked to consider following six categories and to place any number of puff balls into the categories they would prefer to prioritize:

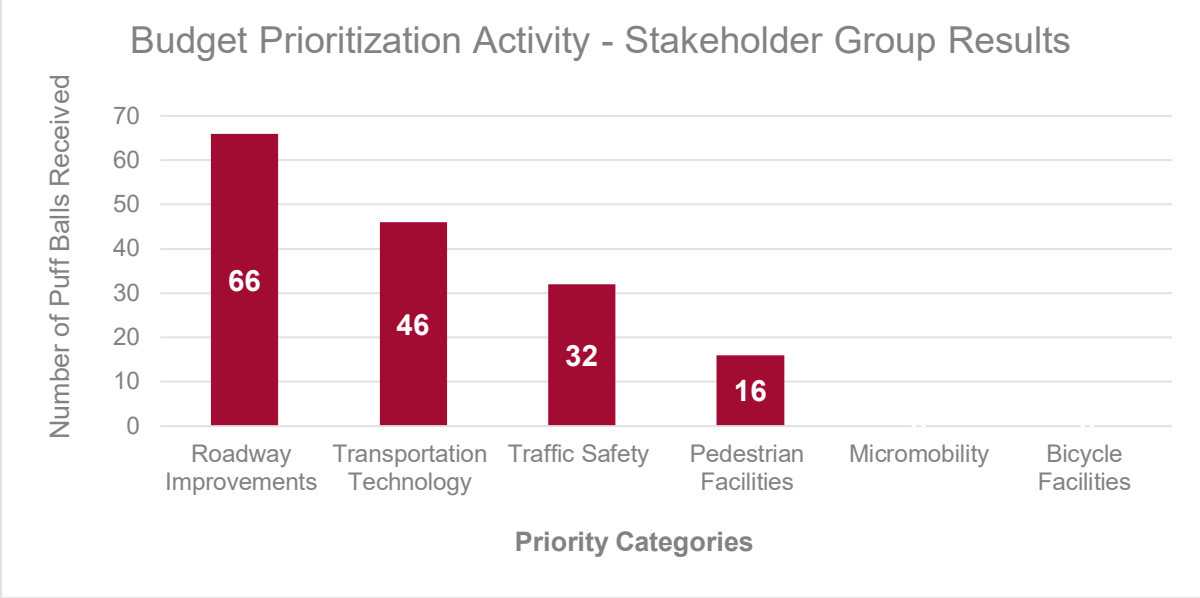
- **Traffic Safety**
- **Pedestrian Facilities**
- **Bicycle Facilities**
- **Roadway Improvements**
- **Micromobility**
- **Transportation Technology**

Below are a few snapshots of the Stakeholders participating in this activity, which is intended to be replicated at the upcoming Spring Fest on April 6 by the Consultant team and also be available online on the project website.





The Budget Prioritization Activity results from the Stakeholders responses are tabulated in the graph below.



Existing Roadway Conditions Map Feedback – Key Points

Below is a summary of some of the comments and feedback that were provided by the Stakeholders on the maps. The raw Stakeholder comments are included in scanned copies of the marked-up maps at the end of this document.

- Old Alvin Road, near FM 518 and Dixie Farm lane's congestion is a concern
- Along Pearland Parkway, turning south towards Dixie Farm Road. There are no middle lanes, and this has been an issue for the last decade
- Heading West, the Pearland Parkway goes from three to two lanes, causes congestion, and slows down speed
- Magnolia/McHard, the overpass bridge does not drive smoothly for vehicles
- Many of the projects/issues highlighted in the Pearland Prosperity Project are still present, and still need to be addressed
- Truck movements along McHard Road, is difficult because there is not shoulder available for emergencies
- General Traffic Safety, if there is too much traffic, a traffic signal will not work
- Interest in Bus Lanes, Broadway has a lot of commuter traffic, people will speed across to pass by that, has led to accidents
- Lastly, the stakeholders mentioned that the study should acknowledge how much progress Pearland has made in Transportation Improvements in the last few decades

Survey Results (For the Pearland Mobility Study ONLY, 15 surveys received and the results are in maroon)

1. What do you do you the City of Pearland (Select all that apply)
   - ☐ I live here (10 Votes)
   - ☐ I work here (14 Votes)
   - ☐ I shop / play here (9 Votes)
   - ☐ I go to school here (2 Votes)
   - ☐ I own a business here (3 Votes)
   - ☐ I am an elected official here

2. What is your primary mode of travel to work or school? (select all that apply)
   - ☐ Driving alone (15 votes)
   - ☐ Carpool (1 vote)
   - ☐ Telecommute (work/attend from home) (1 Vote)
   - ☐ Uber/Lyft/rideshare
   - ☐ Bike
   - ☐ Walk
   - ☐ Paratransit
   - ☐ Retired

3. Which type of community services and facilities within the City of Pearland do you use most often? (select all that apply)
   - ☐ Shopping / entertainment areas (14 votes)
   - ☐ Hospitals / medical centers (6 votes)
   - ☐ Community / event centers (4 votes)
   - ☐ K-12 schools (8 votes)
   - ☐ Childcare (1 votes)
   - ☐ Recreation facilities / parks (6 votes)

4. How would you describe the existing AUTOMOBILE TRAFFIC within the City of Pearland?
   - ☐ About the same as nearby communities (7 votes)
   - ☐ More congested than nearby communities (6 votes)
   - ☐ Less congested than nearby communities (2 votes)

5. Please let us know if the following transportation issues are of concern in the City of Pearland.

Category	Agree	Neutral	Disagree
Road safety	12	2	1
Road conditions/Maintenance	13	2	
Congestion	12	3	
Intersections in need of improvements	9	6	
Heavy truck traffic	4	10	1
Lack of road connectivity (need additional roads to provide route alternatives)	9	5	1
Railroad crossings	10	4	1
Limited number of, or poor condition of, sidewalks, hike/bike trails	7	6	2
Limited public transportation options	3	6	1

6. How would you describe the existing PEDESTRIAN facilities and amenities (sidewalks / trails, curb ramps, lighting, benches, shade trees, crosswalks, pedestrian islands, audio-assisted crossings, push buttons,etc)?

☐ There are enough pedestrian facilities and amenities where I need them (4 votes)
☐ I would like to see more pedestrian facilities and amenities THROUGHOUT the City (5 votes)
☐ I would like to see more pedestrian facilities and amenities in SPECIFIC locations (4 votes)
Please write in specific location:
*(**Connectivity** in and around 518 Shopping Centers. Schools. Around Schools. Clear Creek Trail)*
☐ I do not WALK for leisure/exercise/travel/commuting (2 votes)

7. How would you describe the existing BICYCLE facilities (bike lanes, shared use paths, safety measures, bike parking, etc)?

☐ I would like to see more bicycle facilities THROUGHOUT the City (3 votes)
☐ I would like to see more bicycle facilities in SPECIFIC LOCATIONS (2 votes)
Please write in specific location: (Clear Creek Trail. Finish Trail System in Clear Creek.)
☐ There are enough bicycle facilities where I need them (2 votes)
☐ I do not BIKE for leisure/exercise/travel/commuting (8 votes)

8. What is the main barrier to walking or biking in Pearland? (select all that apply)

- ☐ Road Safety (4 votes)
- ☐ Missing sidewalks, curb ramps, facility gaps (7 votes)
- ☐ Lack of connectivity to points of interest (5 votes)
- ☐ Traffic volumes, sharing the road with cars traveling at high speeds (4 votes)
- ☐ Weather (7 votes)

9. Do you (or your family members) use mobility aids (wheelchairs, walking frames, electric scooters, etc.) to travel around the local area?

- ☐ Yes
- ☐ No (16 votes)

10. If the following MICROMOBILITY options were made available in the City of Pearland, which ones would you use?

- ☐ Bikeshare (2 votes)
- ☐ Scooter Rentals
- ☐ Golf Carts (3 votes)
- ☐ Other: _____
- ☐ I would not use any of these (8 votes)

Survey Participants, Demographic questions:

1. Please Indicate your race and/or ethnicity: (Select all that apply)

- ☐ Black or African American (1 votes)
- ☐ White/Caucasian (10 votes)
- ☐ Hispanic/Latino (2 votes)
- ☐ Asian/Pacific Islander (1 votes)
- ☐ Native American/Indigenous
- ☐ Prefer Not to Answer (1 votes)

2. What is your age?

- ☐ 18-25
- ☐ 26-45 (4 votes)
- ☐ 46-65 (8 votes)
- ☐ 66 or older (2 votes)
- ☐ Prefer Not to Answer (1 votes)

3. Please indicate your annual income:

- ☐ $25,000 or less
- ☐ $25,001 - $50,000
- ☐ $50,001 - $75,000
- ☐ $75,001+ (13 votes)
- ☐ Prefer Not to Answer (2 votes)

4. How long have you lived or worked in Pearland, if applicable? (Select one)

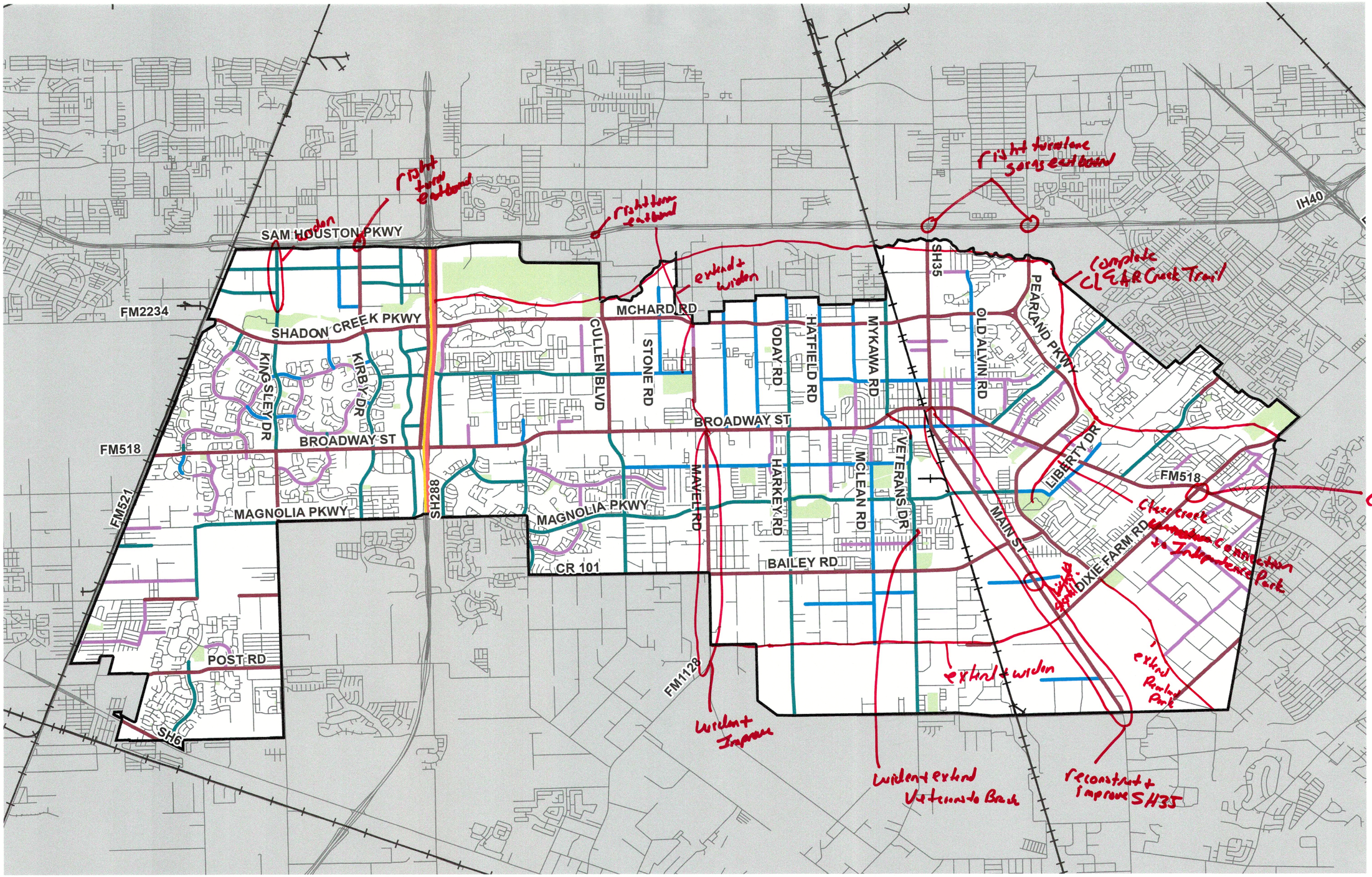
- ☐ 0 – 5 years (1 vote)
- ☐ 6 – 10 years (2 votes)
- ☐ 11 – 20 years (7 votes)
- ☐ 20+ years (5 votes)
- ☐ I don't live/work in Pearland

Photos from the Stakeholder Meeting









City of Pearland

Pearland Mobility Study Area

Kimley»Horn

Existing Road Classification

- Freeway
- Toll-Lane
- Major Thoroughfares
- Secondary Thoroughfares
- Major Collector
- Minor Collector

- City Limits
- Parks
- Railroads

N

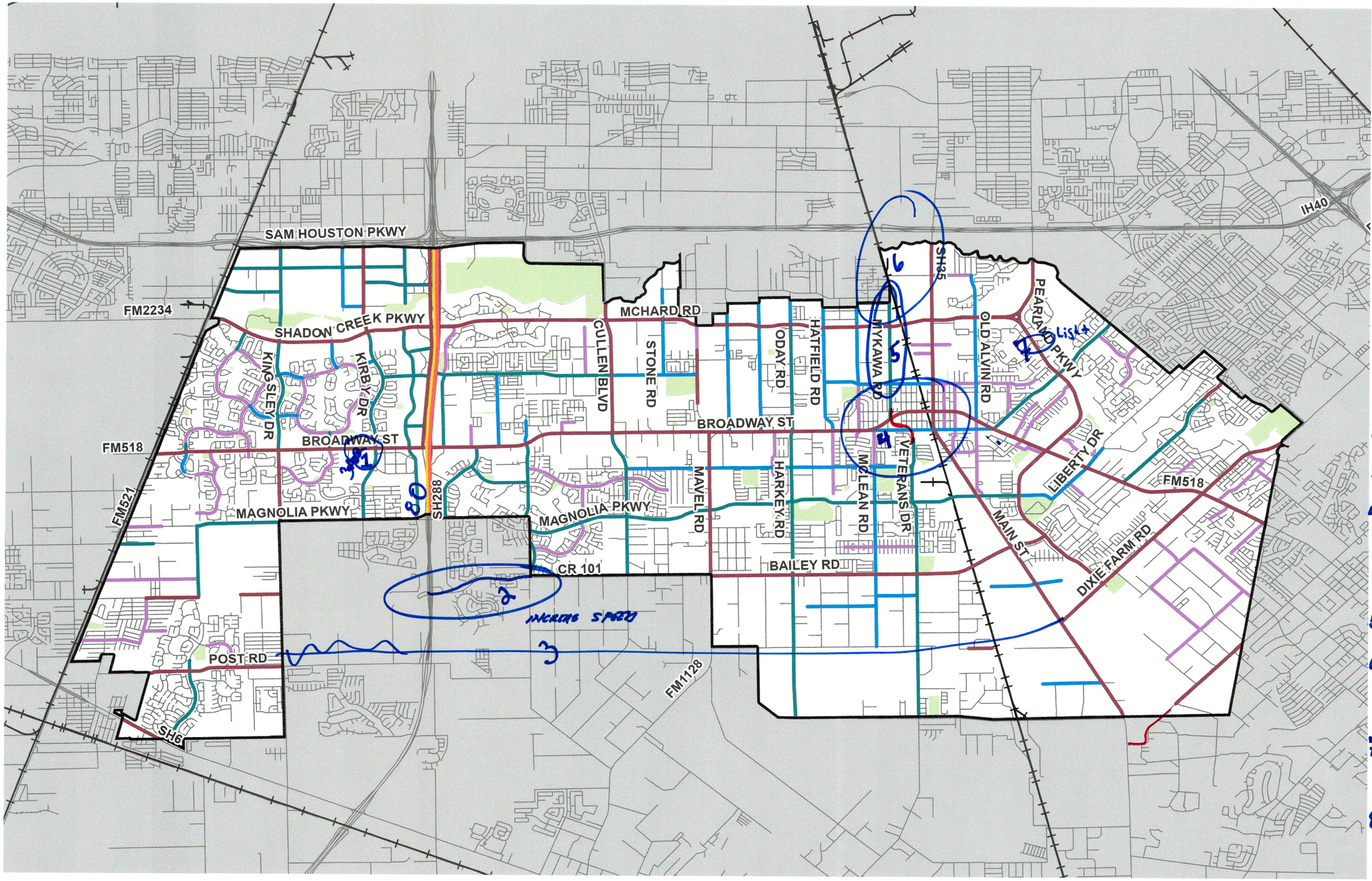
1 inch = 1.75 miles

0 — 1.75 — 3.5

Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: MARCH 2024
CITY OF PEARLAND



City of Pearland

Pearland Mobility Study Area

Kimley»Horn

Existing Road Classification

- Freeway
- Toll-Lane
- Major Thoroughfares
- Secondary Thoroughfares
- Major Collector
- Minor Collector
- City Limits
- Parks
- Railroads

N

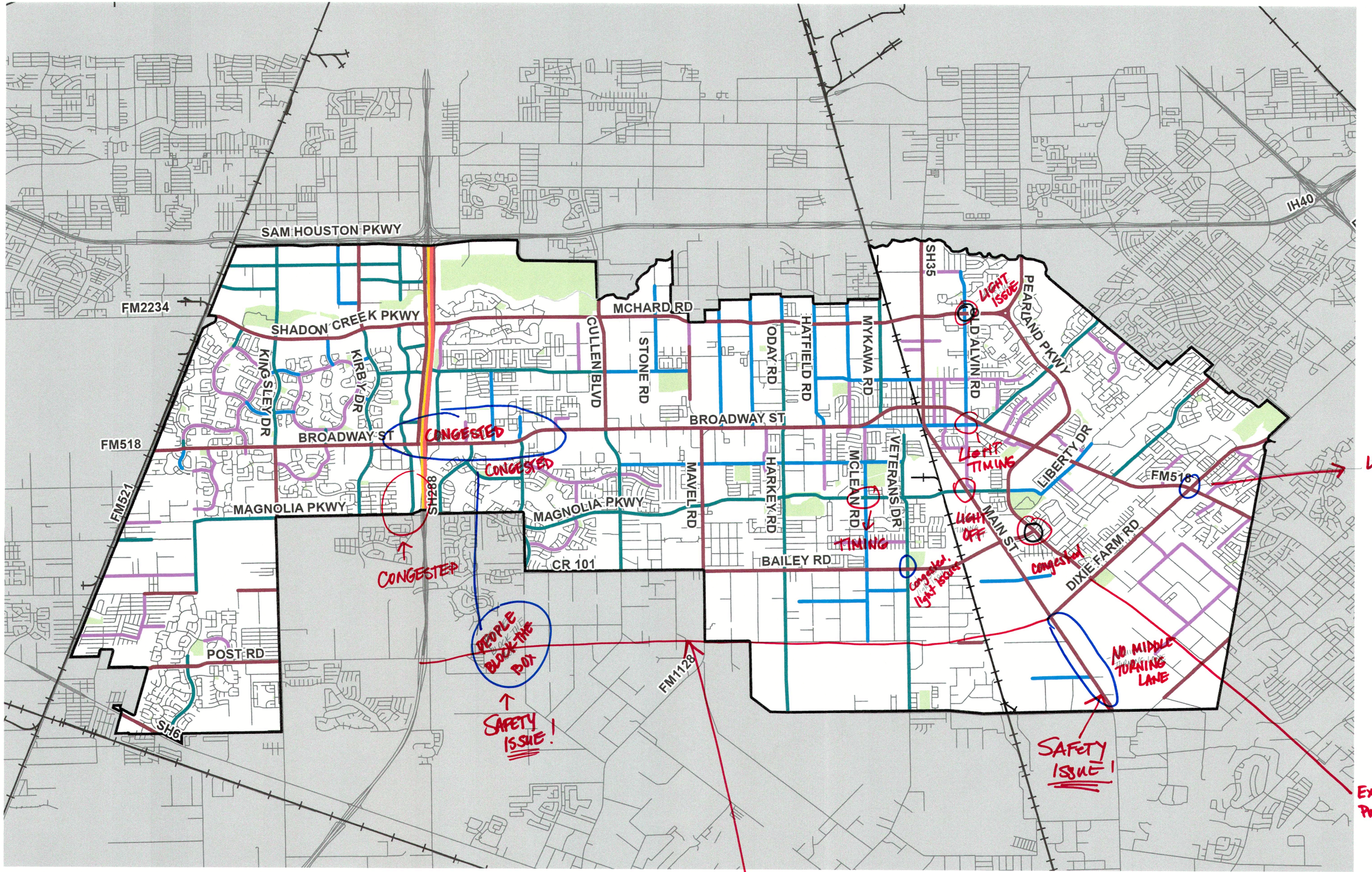
1 inch = 1.75 miles

0 — 1.75 — 3.5

Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: MARCH 2024
CITY OF PEARLAND



City of Pearland

Pearland Mobility Study Area

Kimley»Horn

Existing Road Classification

- Freeway
- Toll-Lane
- Major Thoroughfares
- Secondary Thoroughfares
- Major Collector
- Minor Collector

- City Limits
- Parks
- Railroads

N

1 inch = 1.75 miles

0 — 1.75 — 3.5

Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: MARCH 2024
CITY OF PEARLAND

SAFETY ISSUE
TWO-LANE
NO SHOULDER

THIRD COAST
75 TANK TRUCKS
PER DAY

SAM HOUSTON PKWY
IH40
FM2234
SHADOW CREEK PKWY
MCHARD RD
SH35
PEARLAND PKWY
OLD ALVIN RD
MYKAWA RD
HATFIELD RD
ODAY RD
STONE RD
CULLEN BLVD
KING SLEY DR
KIRBY DR
BROADWAY ST
FM518
FM521
SH288
MAGNOLIA PKWY
MAVEL RD
HARKEY RD
MCLEAN RD
VETERANS DR
LIBERTY DR
MAIN ST
DIXIE FARM RD
CR 101
BAILEY RD
POST RD
SH6
FM1128

TANK TRUCK ACCIDENTS
INTERSECTION
CR 127 & 130
CANT MAKE TURN

20-25 tank Trucks/Container Trucks per day.

18410
DACE ROAD

City of Pearland

Pearland Mobility Study Area

Kimley»Horn

Existing Road Classification

- Freeway
- Toll-Lane
- Major Thoroughfares
- Secondary Thoroughfares
- Major Collector
- Minor Collector

- City Limits
- Parks
- Railroads

N

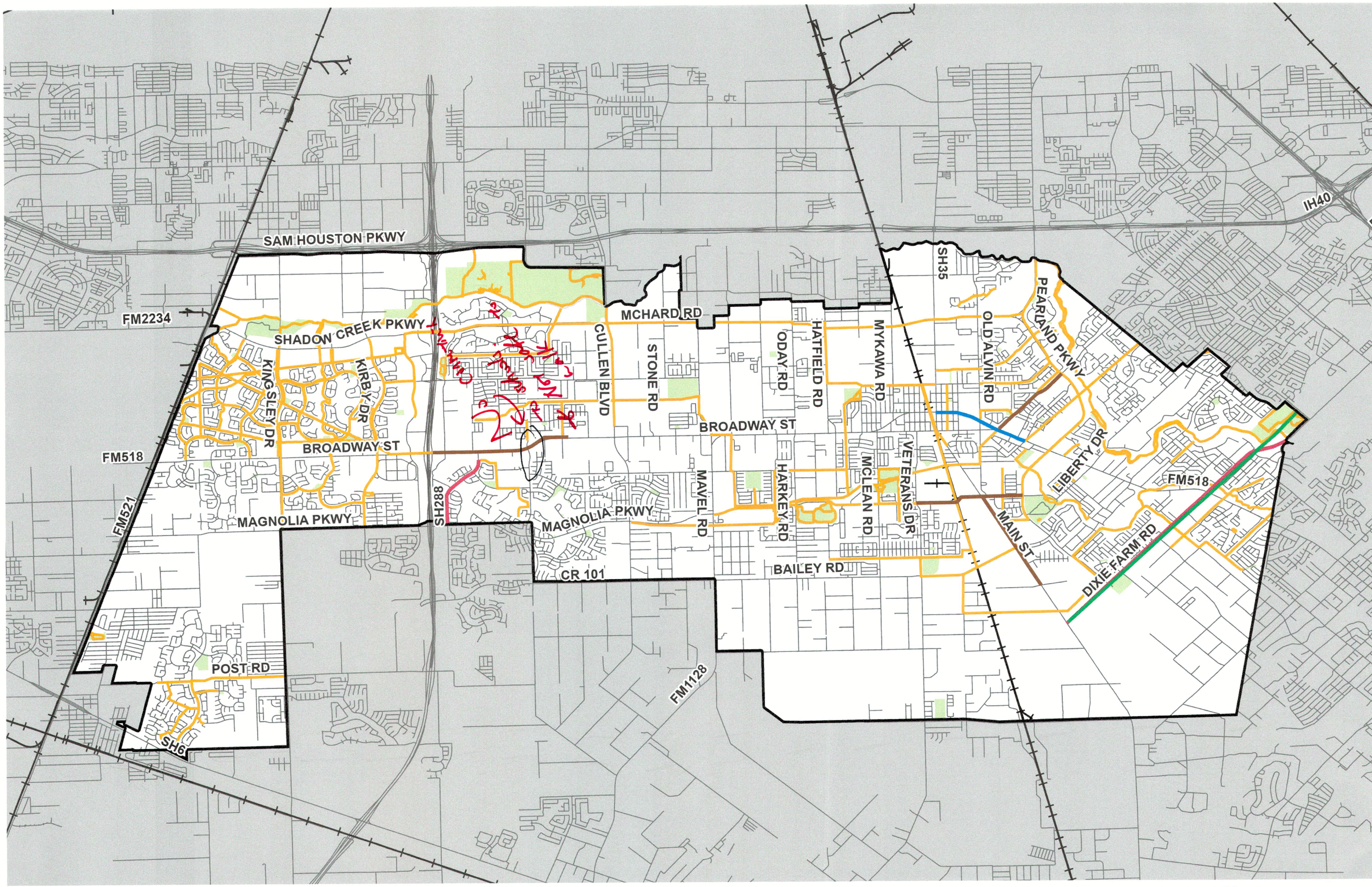
1 inch = 1.75 miles

0 1.75 3.5

Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: MARCH 2024
CITY OF PEARLAND



City of Pearland

Pearland Mobility Study Area

Kimley»Horn

Bicycle/Pedestrian Facility Type

- Shared Use Path/Trail
- Pedestrian Trails
- Signed Shared Roadway
- Bike Lane
- Signed Shoulder Bike Route

- City Limits
- Parks
- Railroads

N

1 inch = 1.75 miles

0 — 1.75 — 3.5

Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: MARCH 2024
CITY OF PEARLAND




Pearland Mobility Study
Stakeholder Group Meeting #1




March 18, 2024

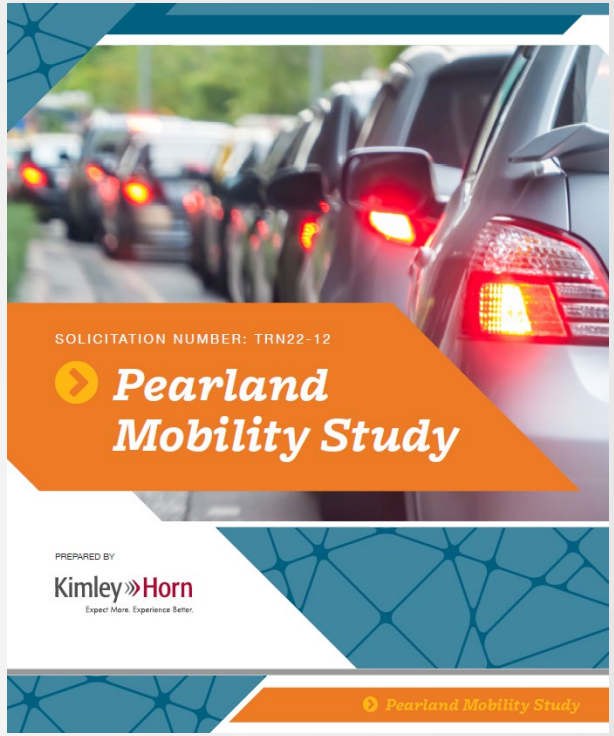
Regional Collaboration • Transportation Planning • Multimodal Mobility

Houston-Galveston Area Council

Agenda: Pearland Mobility Study



- Introductions
- Role of Stakeholder Group
- Project background
- Draft vision and goals
- Major scope items
- Project schedule
- Previous studies
- Existing Conditions
- Known issues
- Public outreach
- Spring Fest activities
- Project questions



Introductions



- City of Pearland
- Stakeholder Group Members

Stakeholders



- ADDI Printing
- Alvin ISD
- Brazoria County Commissioner Precinct 3
- Brazoria Drainage District #4
- Farmers Insurance
- Frontier Forklifts
- HCA Houston Healthcare Pearland
- Kelsey-Seybold
- Pearland Bicycles
- Pearland Chamber of Commerce
- Pearland Economic Development Corporation
- Pearland Emergency Medical Services
- Pearland ISD
- Pearland Town Center
- San Jacinto College
- Scooters Coffee
- Third Coast Terminals

Project Team - Pearland Mobility Study



- Qun Zhao – H-GAC Project Manager
- Carlene Mullins – H-GAC Deputy Project Manager

Kimley-Horn Project Leadership

- Mike Feeney
- Vivek Deshpande
- Jenny Lai
- Ryan Graves

Houston-Galveston Area Council

Kimley»Horn
Expect More. Experience Better.

GRADIENT

HDR

ATG | DCCM

EPS GROUP

Role of the Stakeholder Group



- Attend up to Four (4) planned meetings (the next meeting in June 2024)
- Comment on current mobility issues
- Comment on anticipated future growth-related issues
- Provide feedback on issues and potential solutions
- Attend and spread the word about upcoming public events
- Provide data as requested

Project Background



Pearland has become an increasingly desirable place to live and work, which presents both challenges and opportunities in terms of improving multimodal connectivity and mobility while accommodating growth and redevelopment across the city. The overarching challenge is how to reduce current congestion and a less-than-complete roadway network while also incorporating citizens' priorities.

Draft Vision Statement

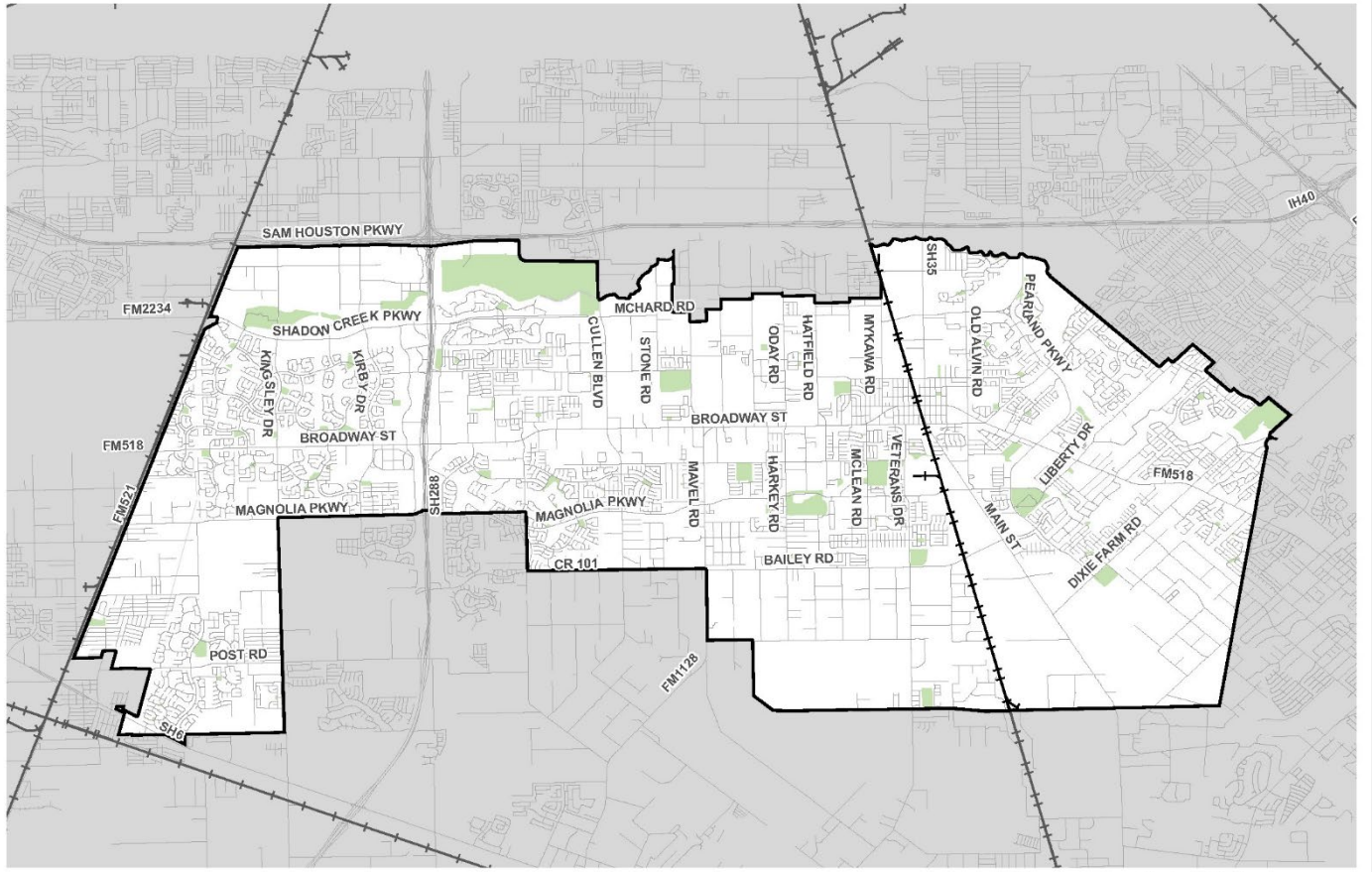
The Pearland Mobility Plan will **prioritize multi-modal improvements** and strategies to **improve mobility for people, goods, and services; enhance traffic safety**; and **accommodate growth**. Furthermore, the plan will develop a **trackable list of projects and initiatives** for the future.

Draft Goals

- Move People and Goods Efficiently
  - Updated Thoroughfare Plan
  - Traffic Analysis of Major Corridors & Key Intersections
  - Incorporate Transit Study Recommendations
- Improve Traffic Safety
  - Recommendations for Current Crash Hotspots
  - Recommendations on Improved Bike & Pedestrian Connections
- Strengthen Regional Economic Competitiveness
  - Transportation & Development Policy Review
  - Project prioritization & dashboard

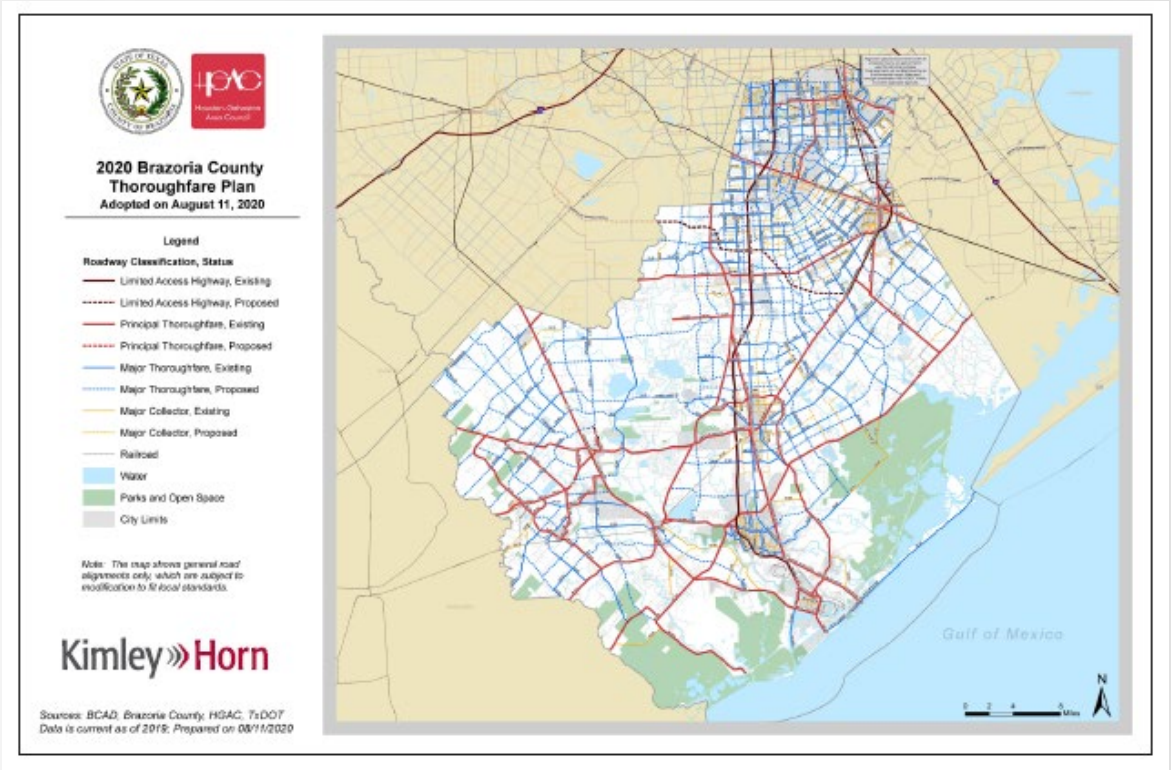
Study Area




SAM HOUSTON PKWY
IH40
FM2234
SHADOW CREEK PKWY
MCHARD RD
SH35
PEARLAND PKWY
OLD ALVIN RD
MYKAWA RD
HATFIELD RD
ODAY RD
STONE RD
CULLEN BLVD
KINGSLEY DR
KIRBY DR
BROADWAY ST
FM518
FM521
SH288
MAGNOLIA PKWY
MAVEL RD
HARKEY RD
MCLEAN RD
VETERANS DR
LIBERTY DR
MAIN ST
DIXIE FARM RD
CR 101
BAILEY RD
POST RD
FM1128
SH6
City of Pearland
Pearland Mobility Study Area
Kimley»Horn
Streets
City Limits
Parks
Railroads
N
1 inch = 1.75 miles
0
1.75
3.5
Miles
This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.
MAP PREPARED: JANUARY 2024
CITY OF PEARLAND

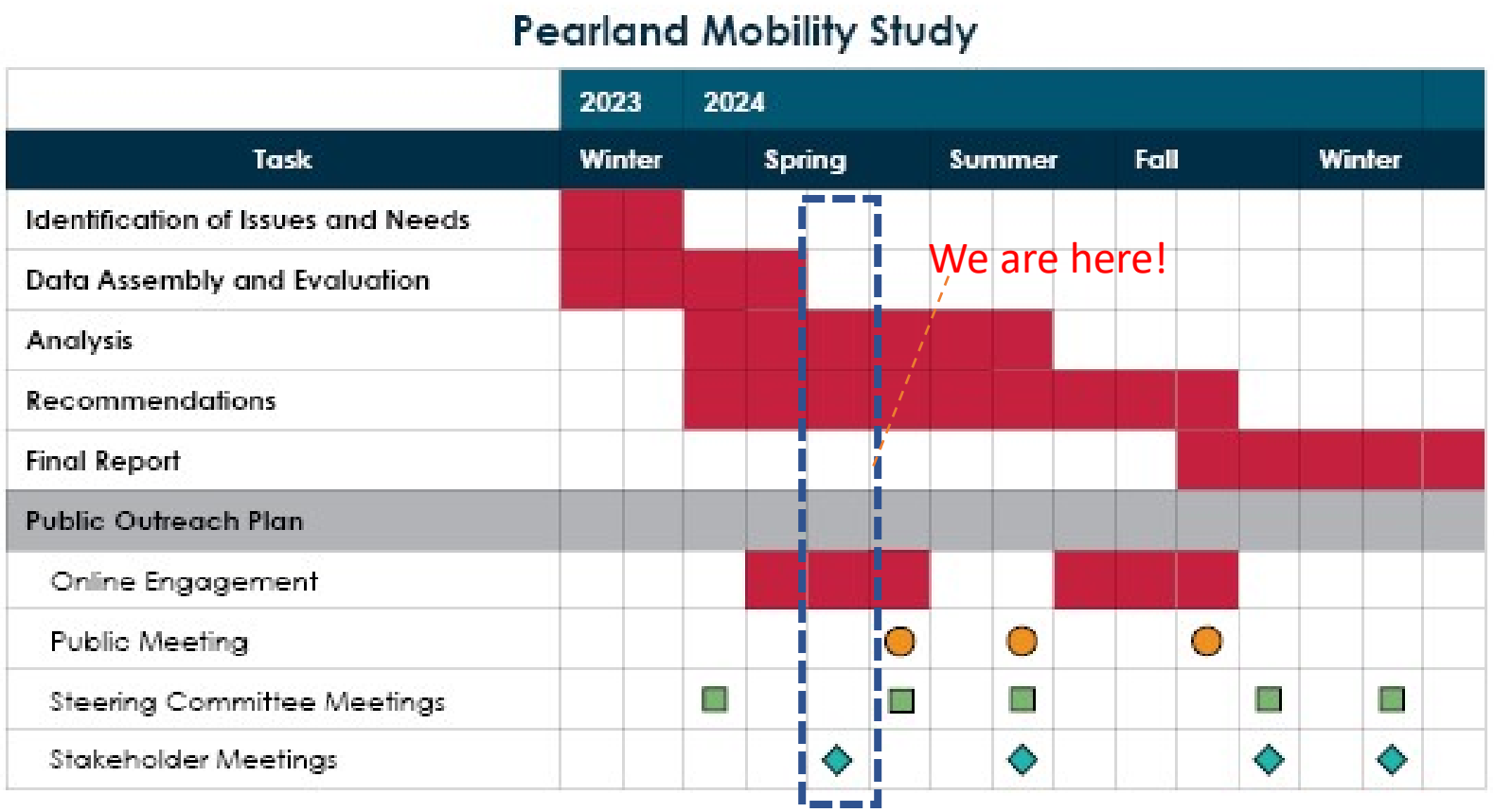
Major Scope Items

- Thoroughfare plan update
- Traffic analysis & recommendations
- Multimodal concerns
- Policy review
- Project prioritization



Example Thoroughfare Plan:
2020 Brazoria County Thoroughfare Plan

Schedule

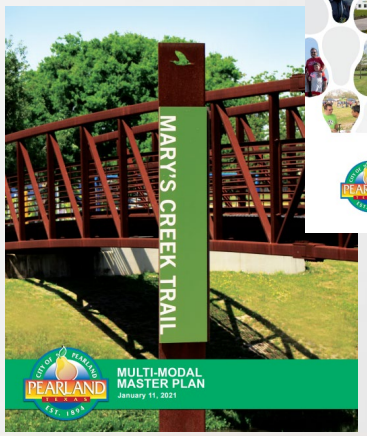

Pearland Mobility Study
2023
2024
Task
Winter
Spring
Summer
Fall
Winter
Identification of Issues and Needs
Data Assembly and Evaluation
Analysis
Recommendations
Final Report
Public Outreach Plan
Online Engagement
Public Meeting
Steering Committee Meetings
Stakeholder Meetings
We are here!

Previous Studies

- Pearland Comprehensive Plan
- Pearland Transit Study
- Pearland Multi-Modal Master Plan
- 2021 Updates to Pearland Thoroughfare Plan
- PEDC Broadway Corridor Development Plan
- Pearland Parks Master Plan
- TxDOT FM 518 Widening



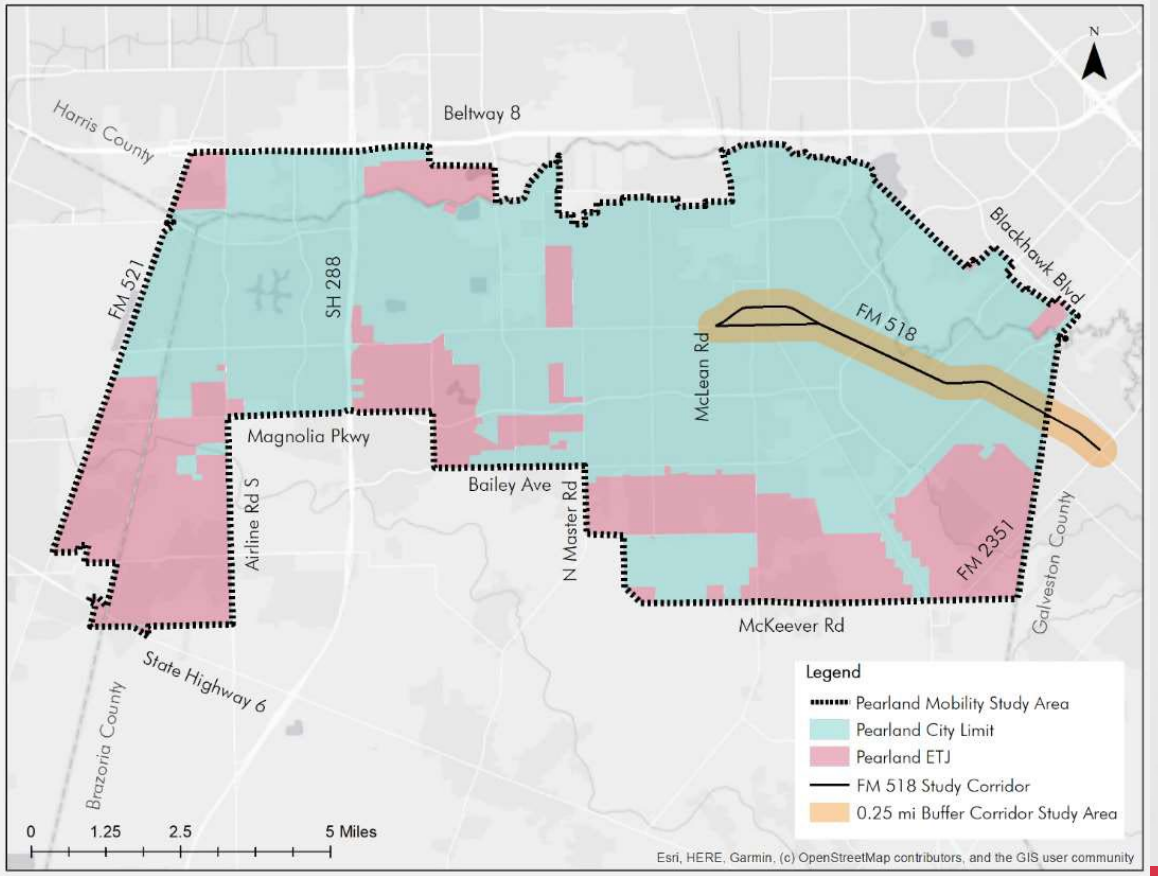




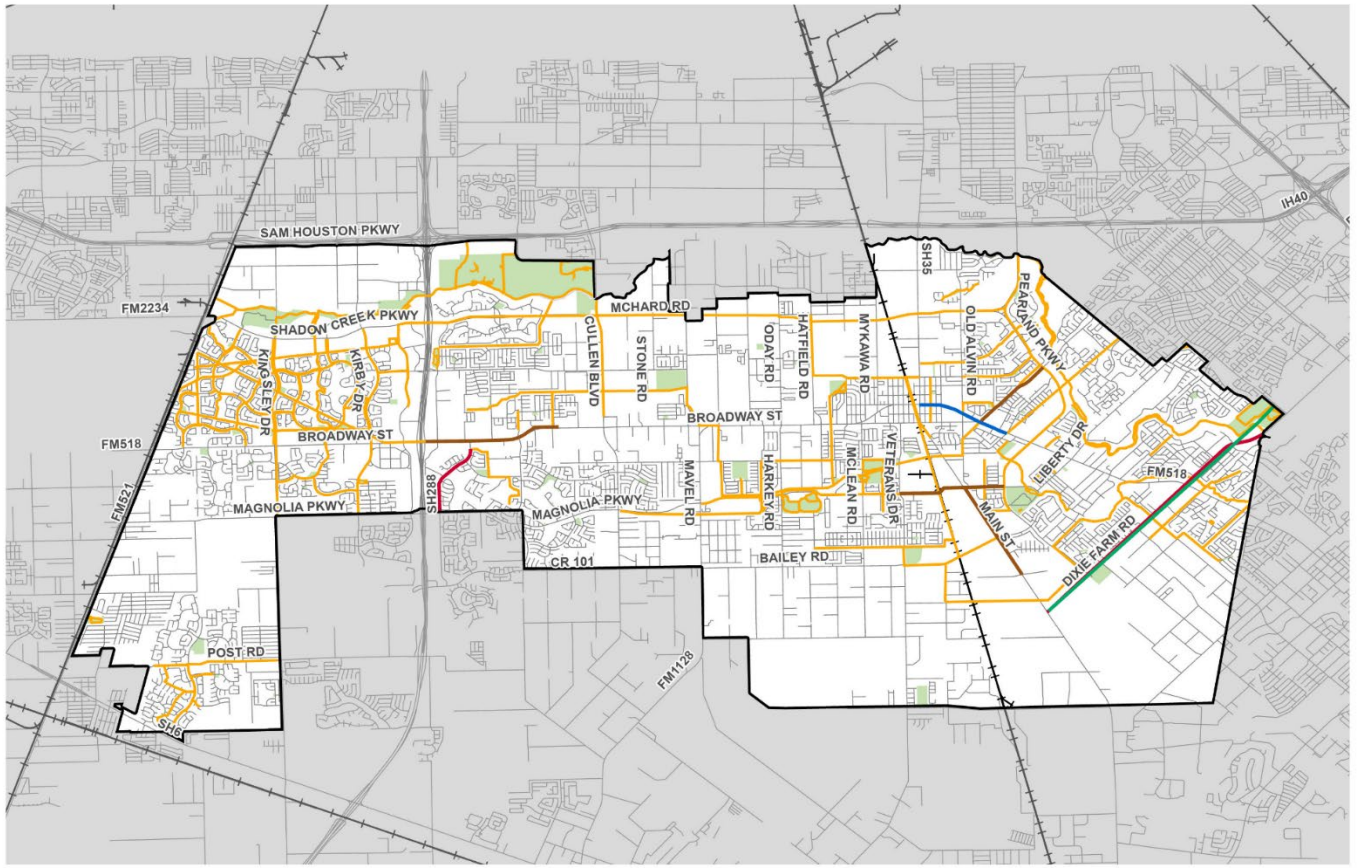
Concurrent Studies in Pearland



- FM 518 Corridor Study
  - Similar Study Areas
  - Common Steering Committee Members
  - Same Project Sponsor
- Pearland Transit Study



Existing Conditions

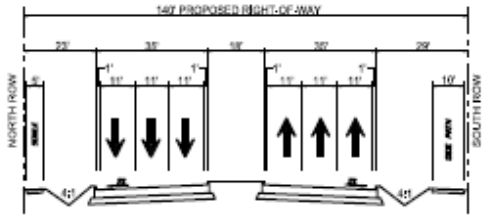


Known Issues

CHALLENGE	OPPORTUNITY
⊖ *There are numerous intersections at, or approaching, capacity throughout the City.* 	⊕ There is an opportunity to explore alternative intersection designs such as roundabouts, single point urban interchanges (SPUI), continuous green t's, etc. Kimley-Horn has studied and implemented alternative intersection designs across the county to improve both mobility and safety and worked on a number of projects using FHWA's Intersection Evaluation Control (ICE) framework.
⊖ *With the Comprehensive Plan proposing additional dense housing types and the Broadway Corridor Plan calling for more professional office space, the mobility plan will need to address this resulting future growth in trips.*	⊕ Completing an update to the City's Thoroughfare Plan as part of this project will allow for preservation of ROW for the projected growth in trips. Additionally, space for new or expanded utility lines and multimodal connections can be part of the suggested cross sections in the Thoroughfare Plan.

CHALLENGE	OPPORTUNITY
⊖ *There are multiple barriers to mobility throughout the city, including railroads, freeways, and waterways.* 	⊕ We will look at available opportunities to provide connections across these barriers where possible by partnering with TxDOT, Brazoria County, and the Brazoria Drainage District No. 4—these partnerships may yield opportunities for shared funding of projects and may result in projects that carry bicycle and pedestrian facilities across these barriers.

Known Issues

CHALLENGE	OPPORTUNITY
TxDOT is widening FM 518 from SH 288 to SH 35; however, they did not extend their work east of SH 35 	There is an opportunity for further coordination with TxDOT and others—we will coordinate closely with the parallel H-GAC FM 518 Study to make sure our recommendations work with those developed with this concurrent effort and also offer potential solutions for the FM 518/Walnut Street split developed in our previous Broadway Corridor Plan. PEDC partnered with TxDOT to reduce the proposed ROW, and we can continue this partnership for any TxDOT facility within the City—this can lead to forming partnerships with TxDOT (and other relevant agencies) to fund improvements beneficial to all.
The continued development of Pearland as a brand and an increasingly desirable place to live and do business. 	Opportunities exist to develop enhanced intersections and street cross sections that include additional landscaping as well as public art, illumination, and other branding features to elevate the cultural identity of the city. Streetscapes are one of the first elements that visitors to the city see; a well-executed mobility plan in coordination with PEDC's branding efforts identifies these details that effect other city priorities such as economic development.

CHALLENGE	OPPORTUNITY
Pearland has developed a strong set of individual trails for non-motorized mobility; however, gaps exist between these facilities.	Building on the existing Multimodal Plan and Parks and Recreation Master Plan, we will identify where gaps exist and include connections between facilities. Implementation of these connections will be included as part of any applicable recommended project.
A majority of trips are made by automobile. 	In addition to bicycle and pedestrian opportunities previously mentioned, we will work to incorporate recommendations from the ongoing H-GAC Pearland Transit Study. Additionally, we have team members with extensive transit experience that may offer new solutions.

Public Outreach



The public will be given opportunities to provide input and feedback through various methods including three (3) in-person meetings and two (2) rounds of online engagement.

Public Meeting #1 (Spring Fest)

Date: April 6, 2024
Purpose: Gather input on the location of specific needs and goals of the community

Public Meeting #2

(Mobility Fair with Pearland 518 Corridor Study)

Date: June 2024
Purpose: Gather input on the draft thoroughfare and cross-sections

Public Meeting #3 (Library Pop-up Event)

Date: September 2024
Purpose: Gather input on draft recommendations



Photo: *Kimley-Horn staff at Pearland Springfest 2022 for the Pearland Comprehensive Plan*

Online Engagement



Using H-GAC's licensed public outreach software, Engagement HQ, survey/interactive maps will be hosted on H-GAC's website at two (2) points during the project:

Round 1

Time Frame: Late March - April 2024

Content: Feedback on mobility concerns and priorities

Round 2

Time Frame: July – September 2024

Content: Feedback on the proposed recommendations

Place QR code

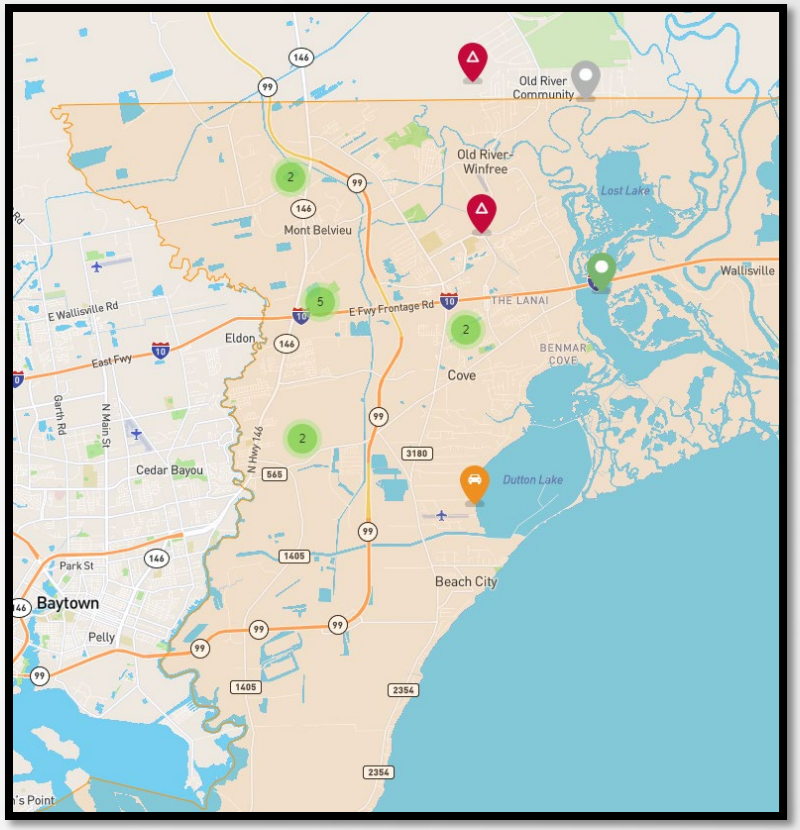


Photo: *The map shown in this photo was created using Engagement HQ for the Chambers County Thoroughfare Plan.*

Spring Fest



- The Pearland Mobility Study project team will be sharing a booth with the FM 518 Corridor Study project team from 10 am to 5 pm
- There will be a survey that includes questions for both projects
- The same survey is available online on both projects' landing pages from March 29 to late April
- Budget Prioritization Activity

Combined Survey



Pearland Mob

1. What do you dc
- ☐ I live here
- ☐ I work here
- ☐ I shop / play he
- ☐ I go to school h
- ☐ I own a busines
- ☐ I am an elected

2. What is your pr
- ☐ Driving alone
- ☐ Carpool
- ☐ Telecommute (v
- ☐ Uber/Lyft/rides
- ☐ Bike
- ☐ Walk
- ☐ Paratransit
- ☐ Retired

3. Which type of c (select all that a
- ☐ Shopping / ente
- ☐ Hospitals / med
- ☐ Community / ev
- ☐ K-12 schools
- ☐ Childcare
- ☐ Recreation facili

4. How would you
- ☐ About the same
- ☐ More congestec
- ☐ Less congested

5. Please let us kn

Category
Road safety
Road conditions/M
Congestion
Intersections in ne
Heavy truck traffic
Lack of road conne
Railroad crossings
Limited number of
Limited public transportation

6. How would you describe th ramps, lighting, benches, s buttons,etc)?
- ☐ There are enough pedestri
- ☐ I would like to see more pe
- ☐ I would like to see more pe
Please write in specific locc
- ☐ I do not WALK for leisure/e

7. How would you describe th bike parking, etc)?
- ☐ I would like to see more bi
- ☐ I would like to see more bi
Please write in specific locc
- ☐ There are enough bicycle f
- ☐ I do not BIKE for leisure/ex

8. What is the main barrier to
- ☐ Road Safety
- ☐ Missing sidewalks, curb ra
- ☐ Lack of connectivity to poi
- ☐ Traffic volumes, sharing th
- ☐ Weather

9. Do you (or your family mer etc) to travel around the lo
- ☐ Yes
- ☐ No

10. If the following MICROMOI would you use?
- ☐ Bikeshare
- ☐ Scooter Rentals
- ☐ Golf Carts
- ☐ Other: _____
- ☐ I would not use any of thes

FM 518 Corridor

The following questi Drive.

- What are you
  - ○ Traffi
  - ○ Safet
  - ○ Moto
  - ○ Lack
  - ○ Acce
  - ○ Road
  - ○ Othe
- Regarding tra
  - ○ Very
  - ○ Unco
  - ○ No O
  - ○ Comf
  - ○ Very
- What improv
  - ○ Impr
  - ○ Redu
  - ○ Instal
  - ○ Aesth
  - ○ Walk
  - ○ Othe
- Does the cor
  - ○ Yes
  - ○ No
- How would i businesses, from each ca
  - ○ Positi
    - ▪
    - ▪
    - ▪
    - ▪
    - ▪
  - ○ Positi
    - ▪
    - ▪
    - ▪
    - ▪
    - ▪
- Do you have speeding, or (Open Quest

- Please Indicate your race and/or ethnicity: (Select all that apply)
  - ○ Black or African American
  - ○ White/Caucasian
  - ○ Hispanic/Latino
  - ○ Asian/Pacific Islander
  - ○ Native American/Indigenous
  - ○ Prefer Not to Answer
- What is your age?
  - ○ 18-25
  - ○ 26-45
  - ○ 46-65
  - ○ 66 or older
  - ○ Prefer Not to Answer
- Please indicate your annual income:
  - ○ $25,000 or less
  - ○ $25,001 - $50,000
  - ○ $50,001 - $75,000
  - ○ $75,001+
  - ○ Prefer Not to Answer
- How long have you lived or worked in Pearland, if applicable? (select one)
  - ○ 0 – 5 years
  - ○ 6 – 10 years
  - ○ 11 – 20 years
  - ○ 20+ years
  - ○ I don't live/work in Pearland

Budget Prioritization Activity



Budget Prioritization Activity

TRAFFIC SAFETY



Includes measures like street lights, stop signs, audio-assisted crossings, pavement striping, intersection safety treatments.

PEDESTRIAN FACILITIES



Includes measures like putting in new sidewalks / trails, ADA compliant curb ramps, lighting along pedestrian paths, benches.

BICYCLE FACILITIES



Includes measures like putting in new bike lanes, shared use paths, improve connectivity between existing lanes and paths, bike parking.

ROADWAY IMPROVEMENTS



Includes measures like widening roadways, turn lanes, on-street parking, medians, repairing potholes.

MICROMOBILITY



Includes measures like bikeshare facilities, scooter rentals, golf carts.

TRANSPORTATION TECHNOLOGY



Includes measures like traffic signal timing / coordination, traveler information, traffic monitoring, travel time monitoring.

SHOW US WHAT MATTERS TO YOU BY BUDGETING FOR EACH CATEGORY.
EACH BALL REPRESENTS $1,000. YOU HAVE $10,000 (10 BALLS).
PLACE YOUR 10 BALLS INTO THE JARS REPRESENTING
YOUR PRIORITIES FOR FUTURE FUNDING.

BUDGET FOR THE FUTURE

SHOW US WHAT MATTERS TO YOU BY BUDGETING FOR EACH CATEGORY.
EACH BALL REPRESENTS $1,000. YOU HAVE $10,000 (10 BALLS).
PLACE YOUR 10 BALLS INTO THE JARS REPRESENTING
YOUR PRIORITIES FOR FUTURE FUNDING.

Questions on Pearland Mobility Study?



For more information:

- Qun Zhao, H-GAC Project Manager
  Qun.Zhao@h-gac.com

- Carlene Mullins, H-GAC Deputy Project Manager
  Carlene.Mullins@h-gac.com

- Website
  www.engage.h-gac.com

Pearland Mobility Study
November 7th, 2024, 3:00 PM
Virtual TEAMS Meeting
Stakeholder Group Meeting #2 Notes

FEEDBACK ON PRESENTATION:

1. Remove Pedestrian Access Improvement at Miller Ranch Rd and FM 518
    - Matt Buchanan from the PEDC mentioned that TGB and Garver have been contracted to add pedestrian and connection ramps
    - This project is not within the TxDOT's scope of intersection improvements, and is examined by City of Pearland
2. Put the School Crossing Improvement at Manvel Road to long-term improvement
    - The FM 1128 plans for this area are already in place, and that the project team will need to coordinate with the PISD in regards potentially having public engagement with the school to develop improved sidewalks in this school crossing intersection
3. Pearland Parkway Improvement
    - Matt B. mentioned that this one will likely be less prioritized as the City is hoping the next commercial development will be responsible for connecting the existing sidewalk as part of their development requirement
4. Veterans Drive Existing Sidewalk
    - Matt B. mentioned that this one is necessary but may have to garner more support. This residential neighborhood was built prior to the sidewalk requirements the neighboring newer subdivision were built.
5. Short-Term Intersection Improvement at Pearland Pkwy and E. Broadway St/FM 518
    - Raj from the City mentioned that there are existing plans for two left turn lanes, and two through lanes
    - Matt B. mentioned that the right turn lane is desperately needed as drivers will take the Province Village
6. John Lizer Rd and Pearland Parkway
    - In discussion about the short-term intersection improvements, multiple stakeholders mentioned the need to widen John Lizer Road on the Thoroughfare Plan update, and Pearland Parkway may potentially need to be widened
7. Countermeasures Recommendation at Shadow Creek Pkwy and Kingsley Dr
    - Yolci from the City suggested that an Only Peak Hour sign is added to this intersection
8. Reword the Independence Park Improvement
    - Drew Dietrich – Addi Printing mentioned that he was in a Parks Board meeting where discussion about major funding (16 million) will to allocated to Parks Department for improvements
    - Matt B. mentioned to add recommendation to widen Liberty Drive up to 4 lanes, up to Shady Bend Drive
9. Rail Crossing Improvement at Walnut St Crossing
    - Raj mentioned there are $30 million in sidewalk gap connection, tie this into existing recommendation




Pearland Mobility Study
Stakeholders Group Meeting #2




November 7, 2024

Regional Collaboration • Transportation Planning • Multimodal Mobility

H-GAC
Houston-Galveston Area Council

Introductions



- City of Pearland
- Stakeholders Group Members
- Study Team

Stakeholders



- ADDI Printing
- Alvin ISD
- Brazoria County Commissioner Precinct 3
- Brazoria Drainage District #4
- Farmers Insurance
- Frontier Forklifts
- HCA Houston Healthcare Pearland
- Kelsey-Seybold
- Pearland Bicycles
- Pearland Chamber of Commerce
- Pearland Economic Development Corporation
- Pearland Emergency Medical Services
- Pearland ISD
- Pearland Town Center
- San Jacinto College
- Scooters Coffee
- Third Coast Terminals

Project Team - Pearland Mobility Study



- Qun Zhao – H-GAC Project Manager
- Carlene Mullins – H-GAC Principal Planner

- Vivek Deshpande – Kimley-Horn Project Manager
- Jenny Lai – Kimley-Horn Planner
- Ryan Graves – Kimley-Horn Planner

Houston-Galveston Area Council

Kimley»Horn
Expect More. Experience Better.

GRADIENT

HDR

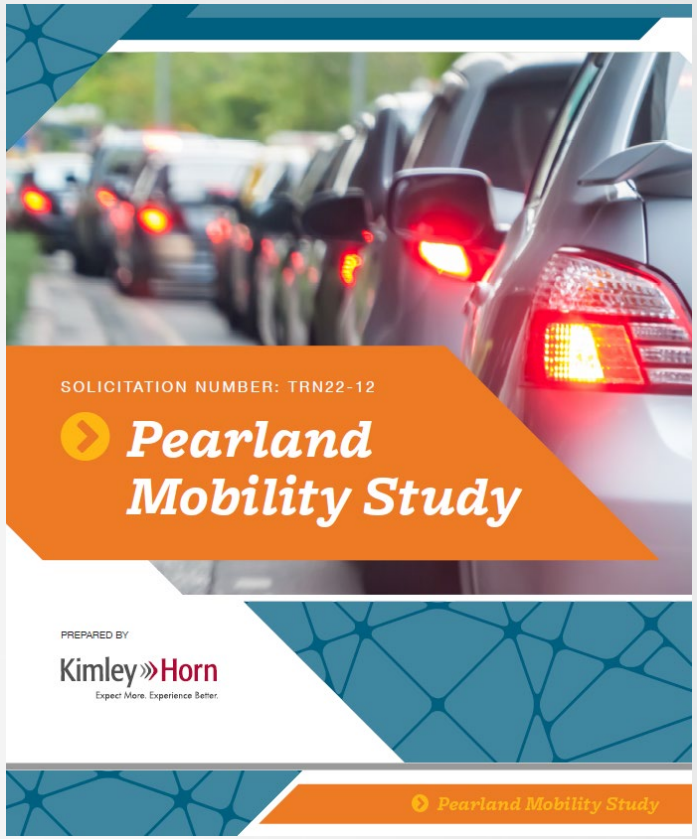
ATG | DCCM

EPS GROUP

Agenda



- Vision and Goals
- Project Schedule
- Existing Conditions
- Preliminary Recommendations
  - Short-term, medium-term, long-term
- Next Steps





Vision and Goals

Vision Statement

The Pearland Mobility Plan will **prioritize multi-modal improvements** and strategies to **improve mobility for people, goods, and services; enhance safety**; and **accommodate growth**. Furthermore, the plan will develop a **trackable list of projects and initiatives** for the future.

Goals

- Move People and Goods Efficiently
  - Updated Thoroughfare Plan
  - Traffic Analysis of Major Corridors & Key Intersections
  - Incorporate Transit Study Recommendations
- Improve Safety
  - Recommendations for Current Crash Hotspots
  - Recommendations on Improved Bike & Pedestrian Connections
- Strengthen Regional Economic Competitiveness
  - Transportation & Development Policy Review
  - Project prioritization & dashboard



Project Schedule

Schedule



Pearland Mobility Study

Task	2023 Winter	2024 Spring	2024 Summer	2024 Fall	2025 Winter
Identification of Issues and Needs					
Data Assembly and Evaluation					
Analysis					
Recommendations					
Final Report					
Public Outreach Plan					
Online Engagement					
Public Meeting					
Steering Committee Meetings					
Stakeholder Meetings					

We are here!



Existing Conditions

Feedback of Mobility Concerns



Locations with mobility issues and concerns identified by the Steering Committee or Stakeholders:

- Mykawa Road, from McHard Road up to Veterans Drive
  - Lack of roadway shoulder relief
  - Heavy truck traffic usage
  - Needs to be widened and connected to Veterans Drive
- Dixie Farm Road & Bailey Road
  - Extend past the City boundary
  - Connect to the western part of the City
- Main Street / SH 35
  - Roadway Improvements, resurfacing
  - Adding middle turn-lanes
- Manvel Road – Roadway Improvements, resurfacing
- FM 518 – General Congestion *(In FM 518 Corridor Study's Study Area)*

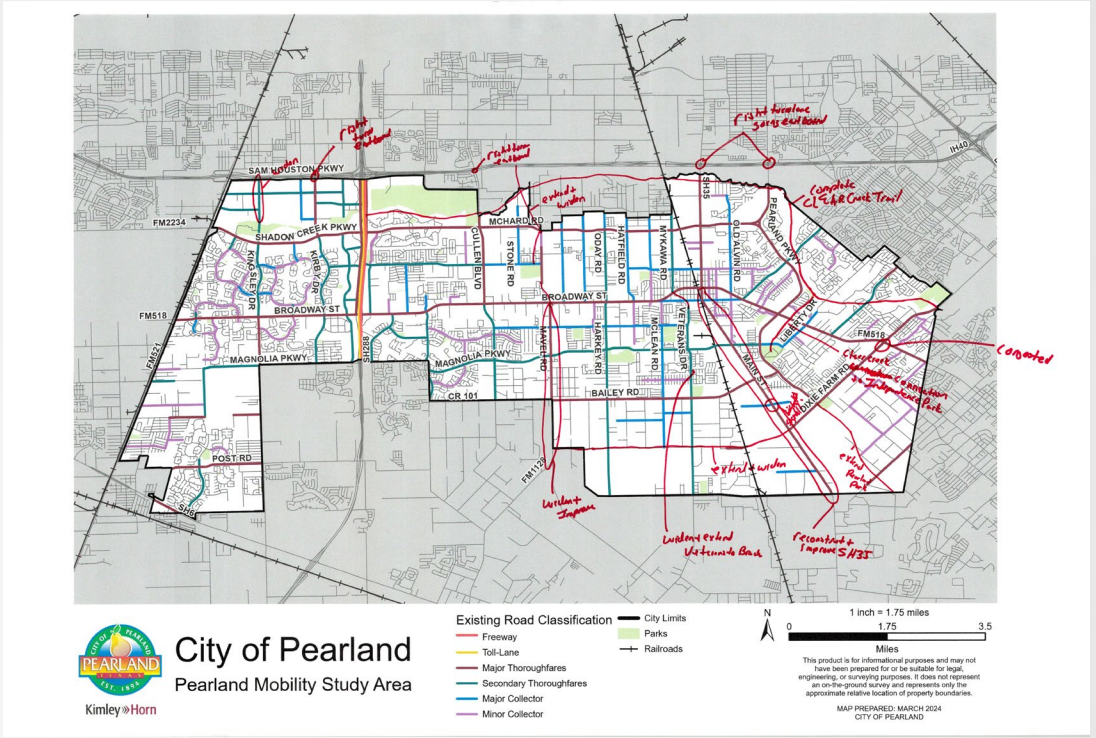
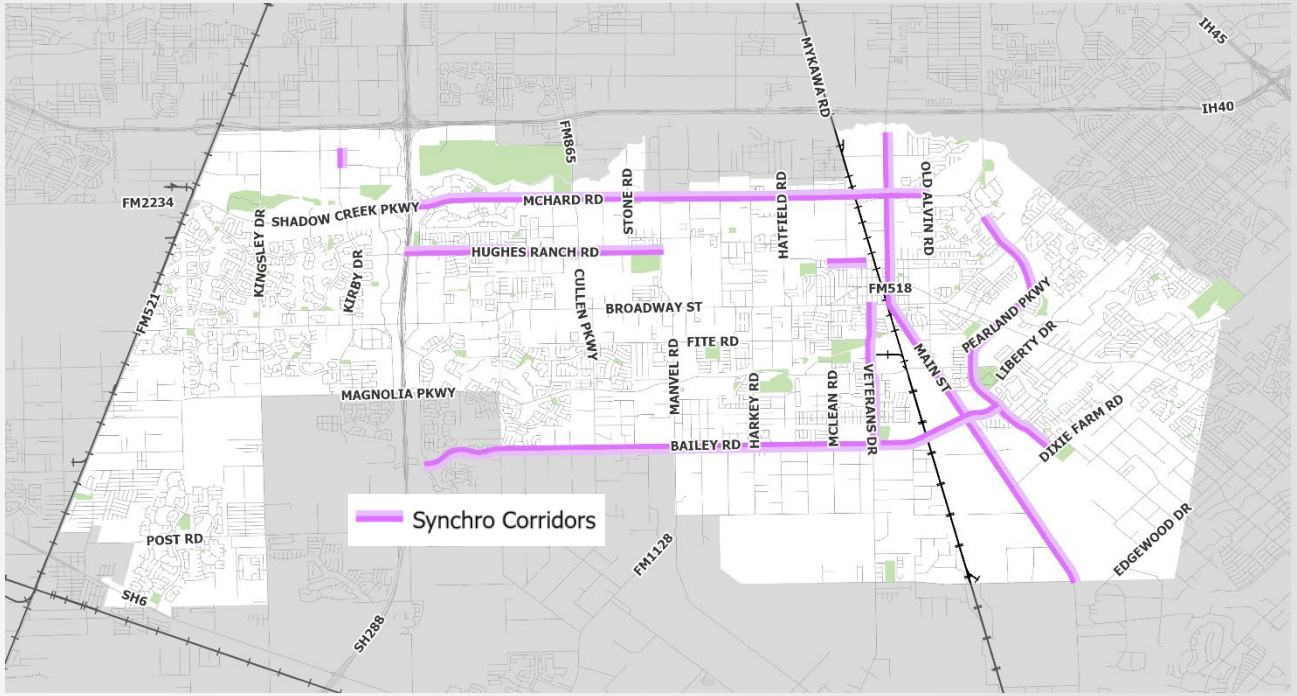


Photo: Map Feedback from 1st Stakeholders Group Meeting

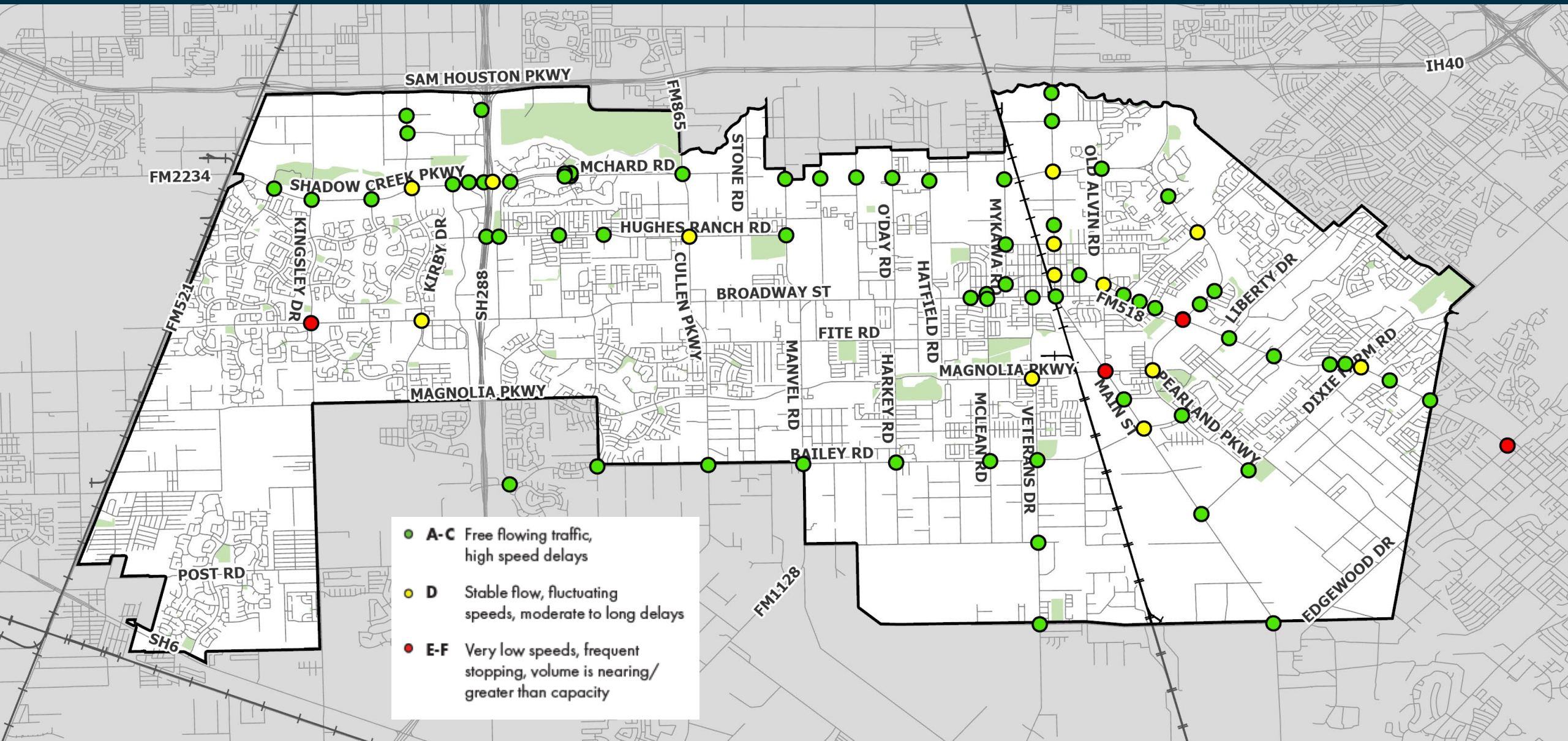
Existing Conditions: Signal Operations Analysis

- **Synchro model used to analyze AM and PM peak signal operations**
- **Analyzed approximately 60 signalized intersections along 7 corridors**
  - SH 35 (Flea Market – Hastings Cannon Road)
  - Pearland Parkway (Forest Park Ln – Dixie Farm Road)
  - Bailey Ave (Smith Ranch Road – Pearland Pkwy)
  - McHard Road (SH 288 – Old Alvin Road)
  - Veterans Dr (Walnut St – Hastings Cannon Road)
  - Hughes Ranch Road (SH 288 – Reid Blvd)
  - Kirby Dr (N Spectrum – S Spectrum)
  - Orange at Mykawa

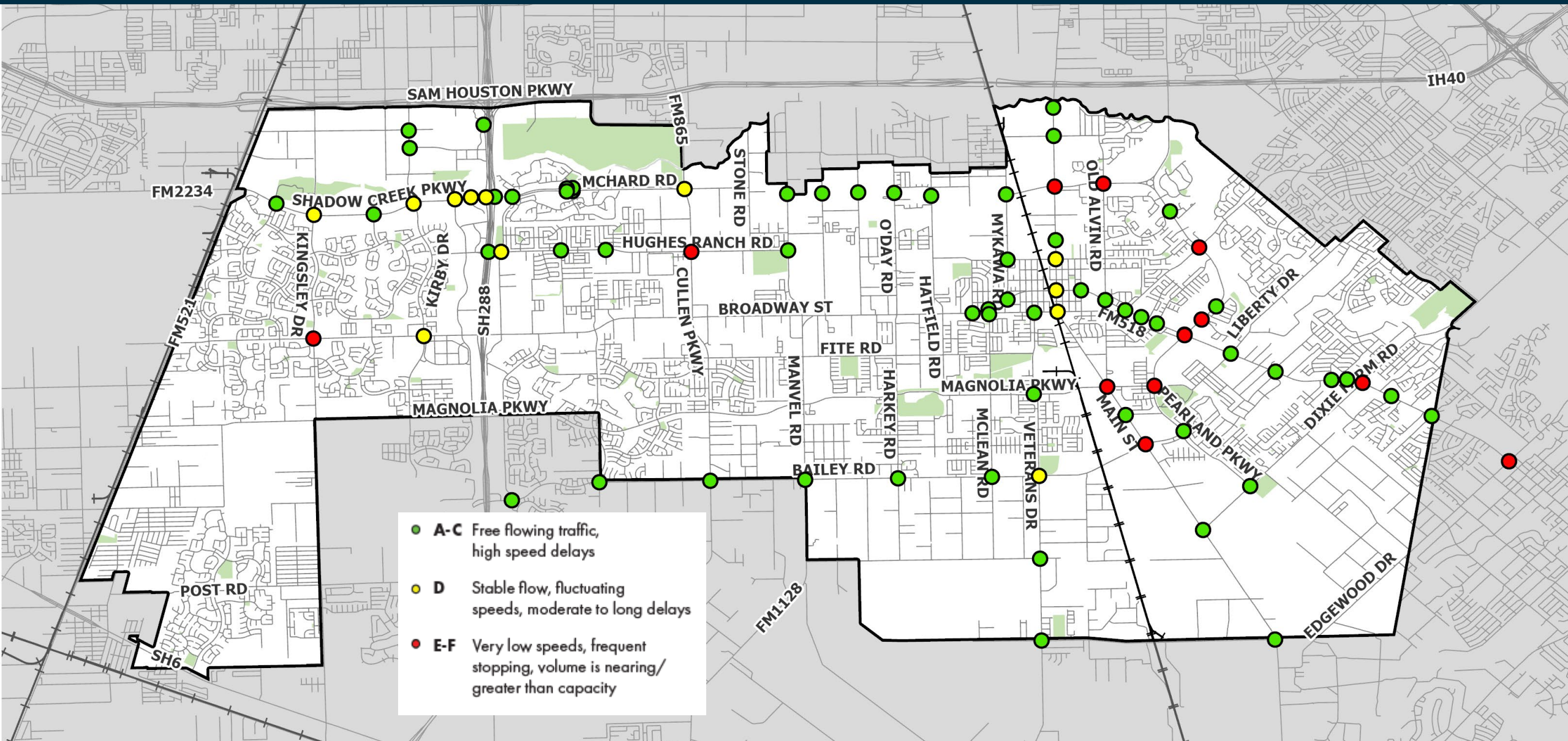
Some of the other intersections have been reviewed in previous studies.



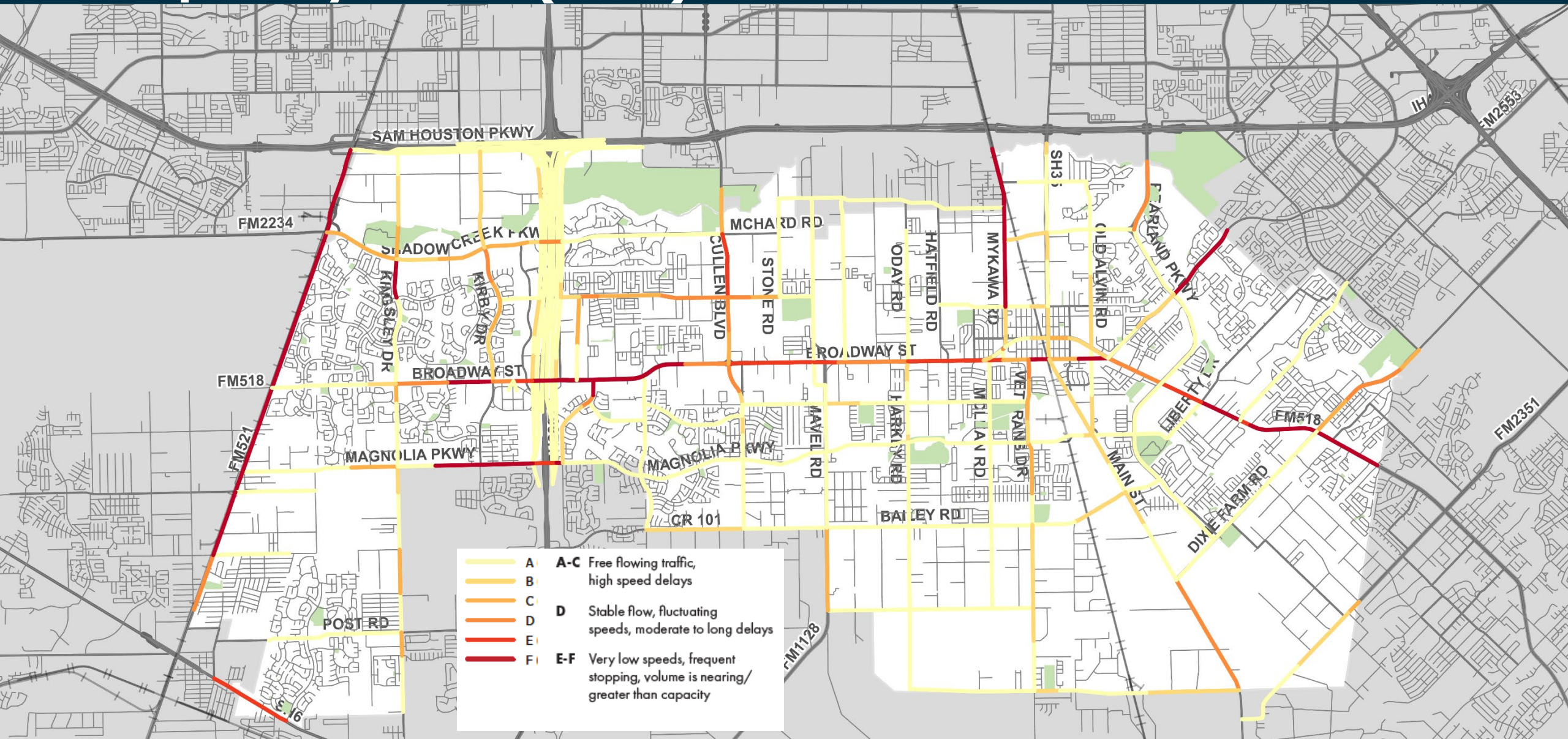
Existing Level of Service – AM



Existing Level of Service – PM



Existing Level of Service – 2023 Volume to Capacity Ratio (V/C)



Public Engagement Summary

1. 1st Steering Committee Meeting (January 23rd)
2. 1st Stakeholder Meeting (March 18th)
3. Pearland Spring Fest (April 6th)
4. Online Engagement (April 1st – April 26th)
5. 2nd Steering Committee Meeting (May 30th)
6. 3rd Steering Committee Meeting (September 18th)



The photo to the left was taken at the 1st Stakeholder Meeting.







Photos to the left were taken at the Spring Fest.

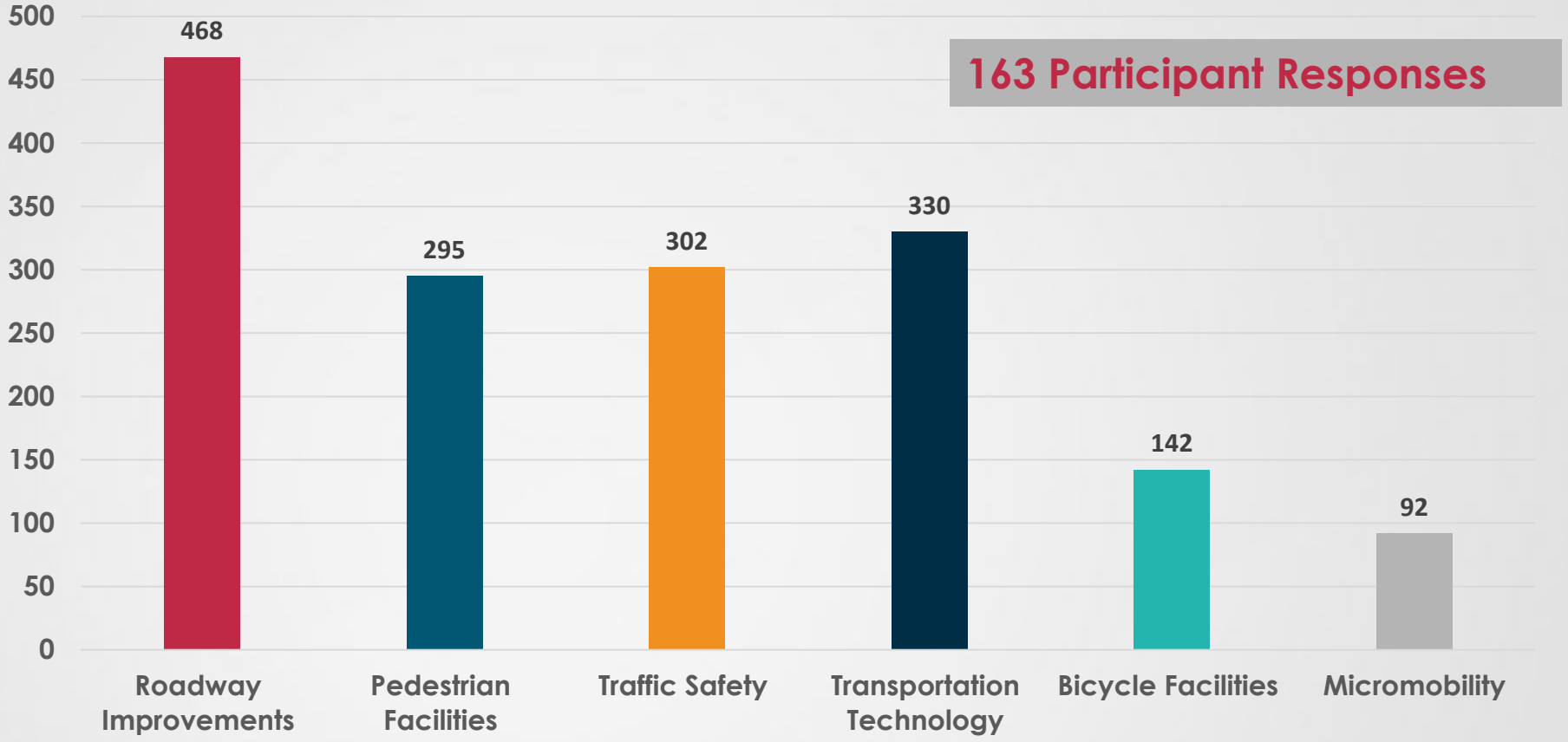
The photo above shows that the flyer, in English and Spanish, was used to spread the word about the projects and upcoming Spring Fest.

Public Engagement Feedback

225 Survey Responses

163 Budget Prioritization Participants

Budget Prioritization Activity Results



163 Participant Responses

Most of the participation results, 138 submissions were from the Spring Fest pop-up engagement. Online participation had received 9 submissions, and the Stakeholder Group had 16 submissions.



Preliminary Recommendations

Recommendations Approach



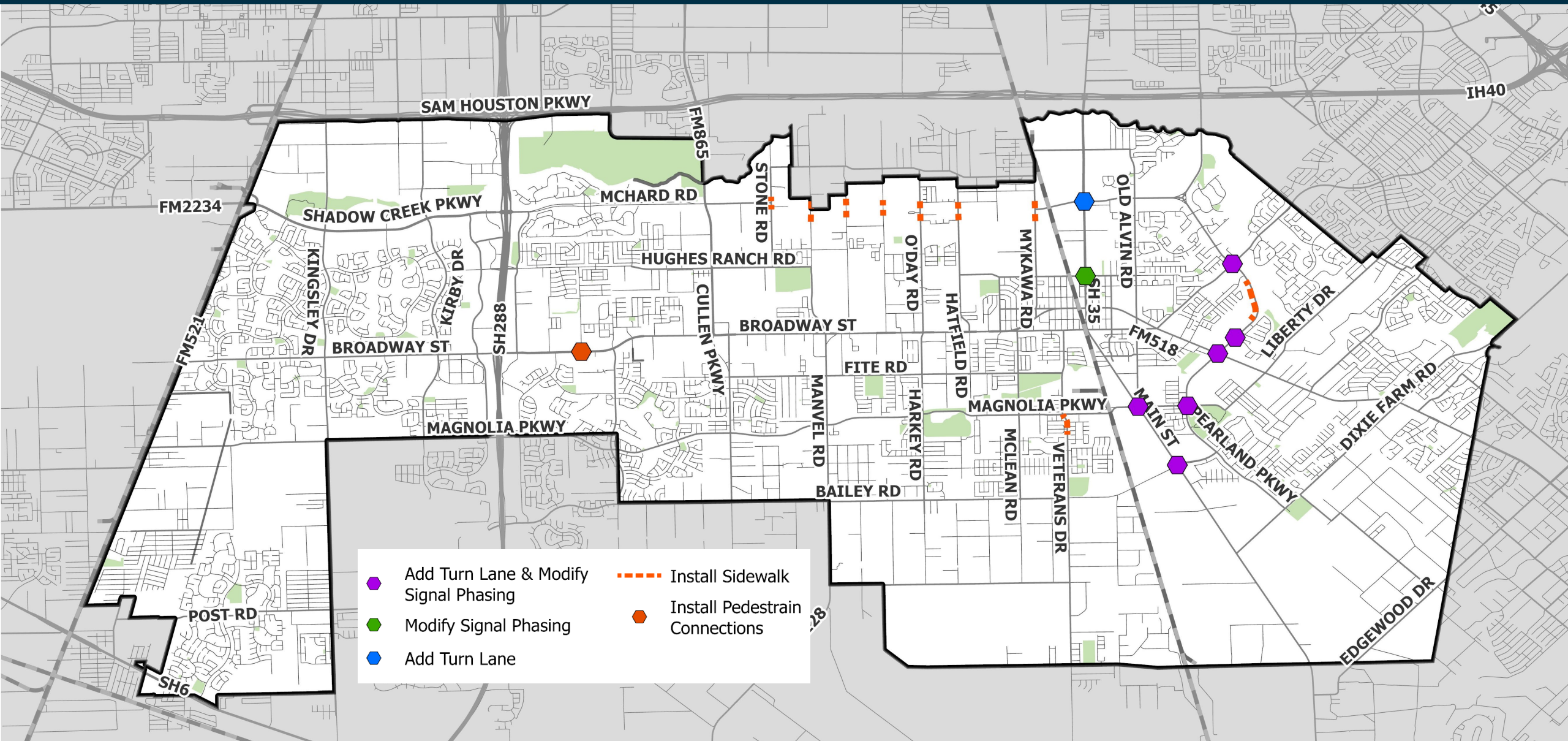
- Existing Conditions Analysis
- Identified Challenges
- Provided recommendations focused on improving mobility for all modes, safety, connectivity, and plan for future growth and are separated by timeframe below:
  - Short Term Improvements (0-5 years)
  - Medium Term Improvements (6-10 years)
  - Long Term Improvements (11+ years)

Short-Term Recommendations (0-5 Years)



- Pedestrian and Cyclist Infrastructure
- Intersection Analysis
- Technology Improvements
- Safety Improvements

Short-Term Recommendations (0-5 Years)



Pedestrian and Cyclist Infrastructure



Recommendations were based on first round of public engagement and existing conditions.

Recommendation Categories:

- Existing Infrastructure along Major Roadways
- School Connections
- East Pearland

Pedestrian Access Improvements



Issue:

The existing intersection at Miller Ranch Rd and FM 518 has ditches between sidewalk and right of way

Recommendation:

Provide pedestrian connection to the road for intersection crossings

Houston-Galveston Area Council

McHard Connecting Streets Improvements



Photo example of Garden Street intersection construction

Issue:

Due to the construction of McHard Street, connecting streets such as Stone, Roy, Max, Garden, O'Day, and Mykawa does not have connecting sidewalks.

Recommendation:

Install new sidewalks/sidewalk connections along connecting streets to McHard Road.

Houston-Galveston Area Council

School Crossing Improvements



Issue:

The crossings along Manvel Road, between neighboring subdivisions and Rogers Middle School and Berry Miller Junior High sees high amounts of pedestrian activity from the students. Existing, none of these crossings are marked or include safety signage.

Recommendation:

Install advanced warning signage for vehicles of school crossing, and stripe crossing.

School Crossing Improvements



Issue:

Pearland High School is next to multiple large residential subdivisions. The intersections circled in photo do not have crossing striping and are not signalized.

Recommendations:

Stripe intersection crossing along Pearland Parkway and Oiler Drive.

Install sidewalk between Barry Rose Road and Shallow Creek Drive.

Houston-Galveston Area Council

Pearland Parkway Improvements



Issue:

The segment of Pearland Parkway, situated between several large subdivisions and neighboring public and private schools, does not have sidewalks along either side of the road.

Recommendations:

Install sidewalks along the west side of the road, connecting to where the existing sidewalk network ends.

Veterans Drive Existing Sidewalk



Issue:

Missing sidewalk segment along the western side of Veterans Drive up to Magnolia

Recommendation:

Connect the existing sidewalk on Veterans Drive to Magnolia Parkway.

ADA Transition Plan



- Americans with Disabilities Act (ADA) – Civil Rights Law
- Title II – 'all government entities with > 50 employees'
- Title II administrative requirements
  - Completion of a Self-Evaluation
  - Development of ADA complaint procedure
  - Designation of 1 person to oversee Title II compliance
  - Develop ADA Transition Plan to schedule removal of barriers uncovered by 'Self Evaluation' process

Intersection Short-Term Improvements



S No	Intersection	Add Turn Lane	Modify Signal Timing
1	SH 35 at McHard Road	EBR and SBR	
2	SH 35 at Orange St		Remove E-W Split Phase; add FYA
3	SH 35 at Magnolia Road	Restripe E-W	Remove Split Phase
4	SH 35 at Bailey Road	SBR, EBR, WBR	Remove Split Phase
5	Pearland Pkwy at Hughes Road	NBR; Restripe E-W	Remove Split Phase
6	Pearland Pkwy at Province Village	Restripe E-W	Remove Split Phase
7	Pearland Pkwy at FM 518	WBR	Adjust Timings
8	Pearland Pkwy at John Lizer Road	SBR	Adjust Timings

EBR = Eastbound Right-turn bay
SBR = Southbound Right-turn bay
WBR = Westbound Right-turn bay
NBR = Northbound Right-turn bay
SBL = Southbound Left-turn bay

Traffic Signal Technology Improvements



Recommendations to expand below equipment at all traffic signals

- Left-turn Flashing Yellow Arrow Displays
- Radar vehicle detection
- Battery Back-up Units
- Signal Communication (Fiber or Wireless)
- CCTV Cameras
- Accessible Pedestrian Signal (APS) Units
- Emergency Preemption Equipment

Traffic Technology Improvements



Technology Recommendations for System

- Leading Pedestrian Interval (LPI)
- Update Central Control System
- Coordinated Signal Timing Plans
- Staff Traffic Management Center
- Advanced Traffic Signal Performance Measures (ATSPMs)
- Arterial Dynamic Message Signs

Emerging Traffic Technology Improvements

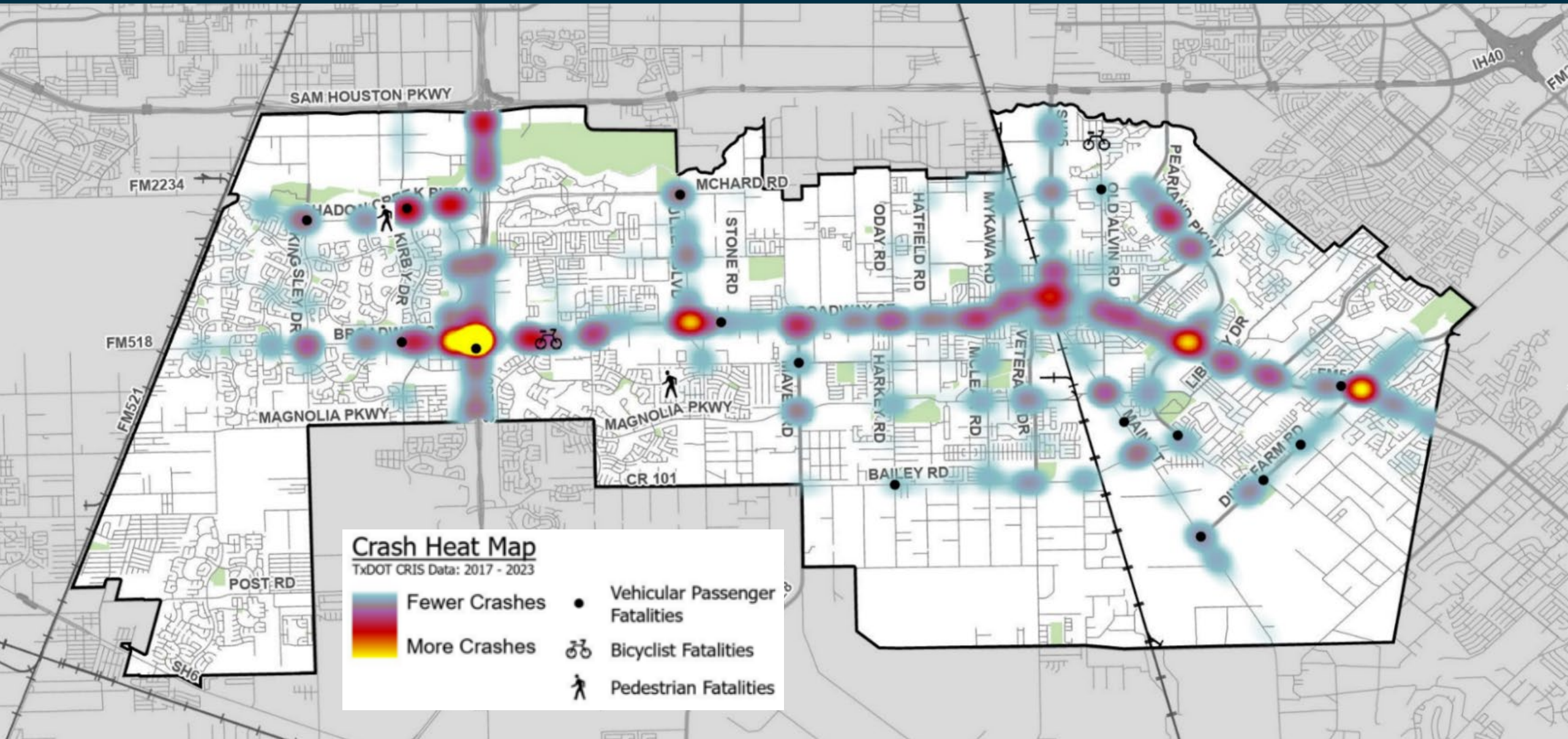


- ITS Master Plan for the City
- Autonomous & Connected Vehicle (A/CV) Framework
- Regional Transportation Systems Management & Operations (TSMO)

Safety Recommendations

- Existing crash data between 2017 – 2023 mapped
- The High Injury Network focused on locations with crashes of severe and/or fatal crashes
- Countermeasure recommendations provided to key locations

Crash Analysis

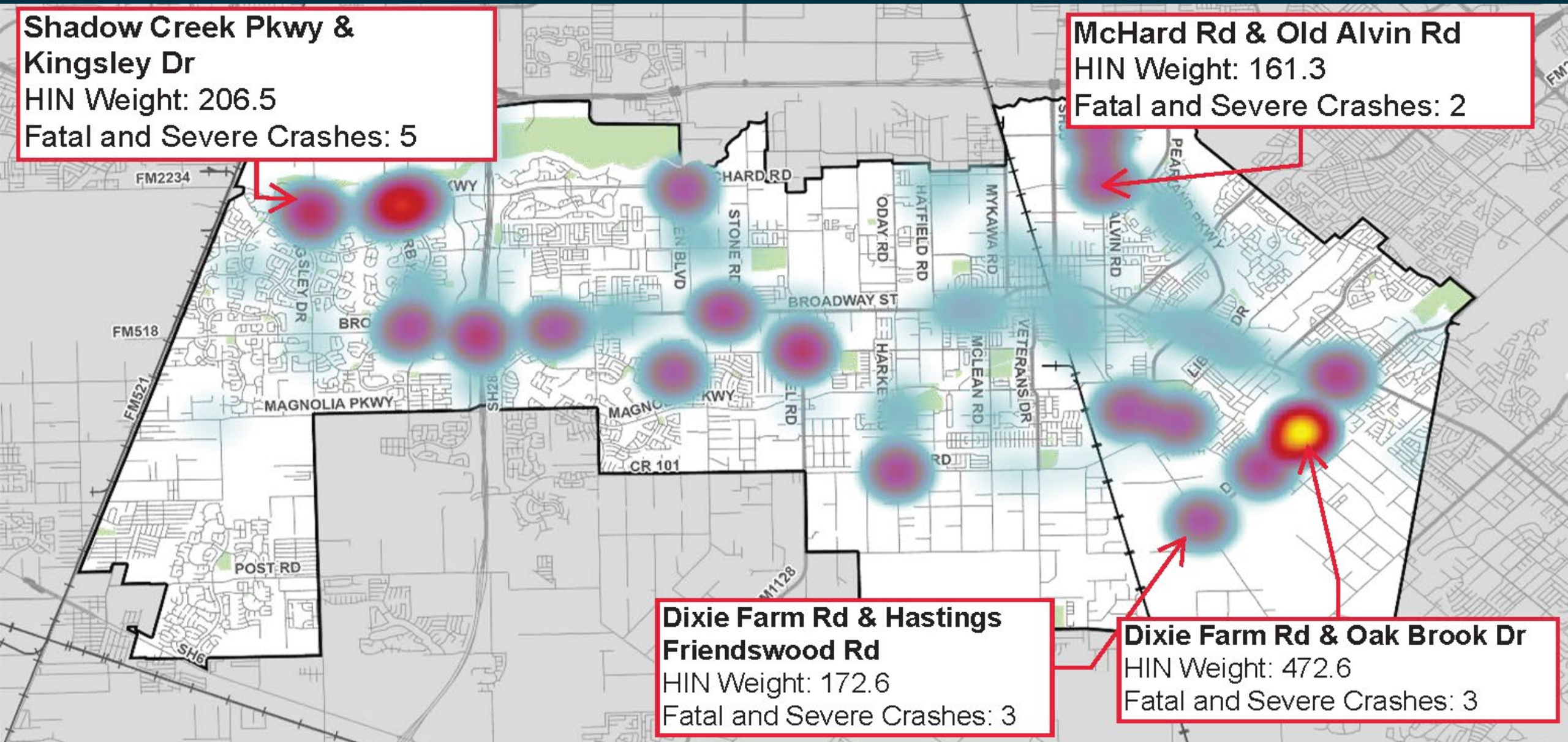


High Injury Network Factors



1) 7-Years of crash data
2) Share of road network
3) Level of analysis
4) Collision density
5) Roadway facility types
6) Equity
7) Consideration of modes

Crashes by HIN Weight



Countermeasures Recommendation

Intersections	Fatal & Severe Crash Count	Person Fatal Count	Person Suspected Serious Injury Count	HIN Weight
Dixie Farm Rd & Oakbrook Dr	3	3	2	472.6

Countermeasure Recommendation

1. Install Advanced Warning Signal
2. Change Left-Turn Movement from Permitted-Protected to Protected Only
3. Change East-West signal phasing to 'Split' phase



Countermeasures Recommendation

Countermeasure Recommendation

Change Left-Turn Movement from Permitted-Protected to Protected

Intersections	Fatal & Severe Crash Count	Person Fatal Count	Person Suspected Serious Injury Count	HIN Weight
Shadow Creek Pkwy & Kingsley Dr	5	1	5	206.5



Countermeasures Recommendation

Intersections	Fatal & Severe Crash Count	Person Fatal Count	Person Suspected Serious Injury Count	HIN Weight
Dixie Farm Rd & Hastings Friendswood Rd	3	1	2	172.6

Countermeasure Recommendation

Install new traffic signal with advance signage for new traffic signal ahead



Countermeasures Recommendation

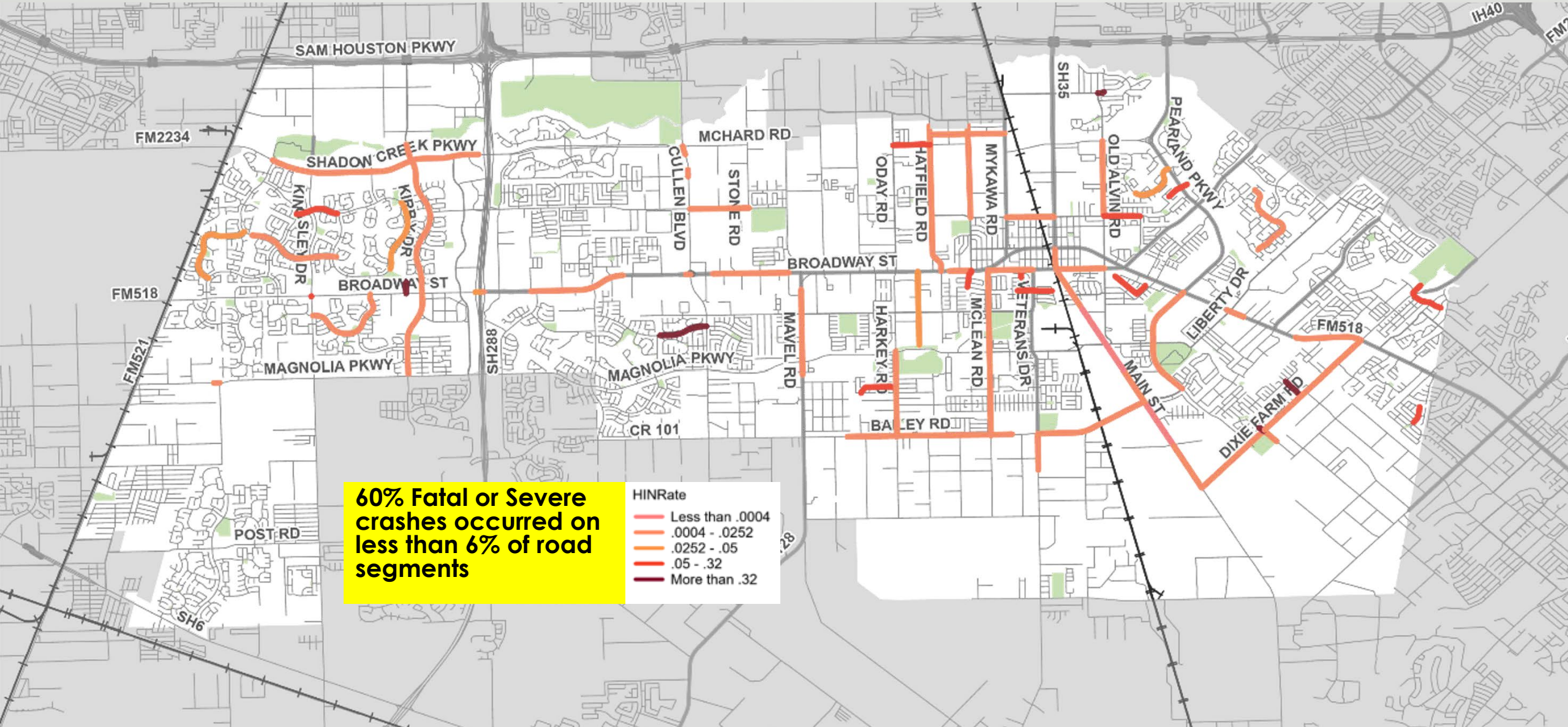
Countermeasure Recommendation

Install Advanced Warning Signal

Intersections	Fatal & Severe Crash Count	Person Fatal Count	Person Suspected Serious Injury Count	HIN Weight
McHard Rd & Old Alvin Rd	2	1	1	161.3



High Injury Network Road Segments



Segment Countermeasure Recommendations

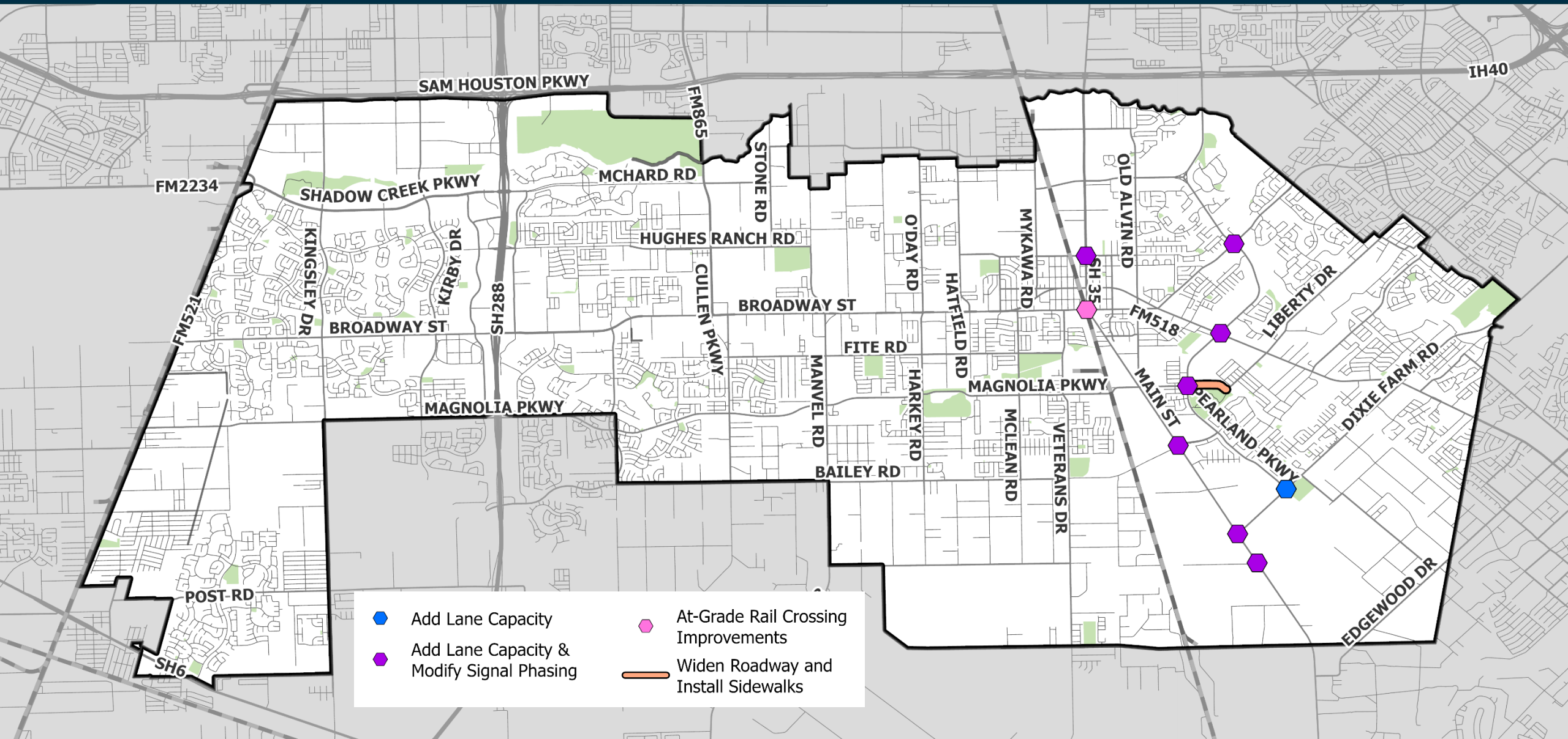
Segment	Crash History	Countermeasure Recommendation
Kirby Road from Shadow Creek Pkwy to Magnolia Pkwy	• One (1) fatal collision • Five (5) severe collisions • Two (2) bicyclist related collision • Two (2) fixed object collisions	• Install Warning/Guide Signs on Minor Approach (101) • Keep Vegetation Trimmed • Install Pavement Markings (401) (Shared Bike Lane Markings)
FM 2234 from SH 288 to Reflection Bay Drive	• One (1) fatal collision • Seven (7) severe (A) collisions • Two (2) pedestrian related collisions	• Improve/Install Sidewalks • Improve Pedestrian Signals • Install Pedestrian Signal (at missing locations)

Medium-Term Recommendations Assumptions



- Intersection Analysis
  - Assumed annual growth rate - 4%
  - Intersection evaluation - 2034

Medium Term Recommendations (6-10 Years)



Intersection Medium-Term Improvements



S No	Intersection	Add Lane Capacity	Modify Signal Phasing
1	SH 35 at Orange St	WBR	Adjust signal timings
2	SH 35 at Bailey Road	Second NBL	Remove Split Phase
3	SH 35 at Dixie Farm Road	NBR	Adjust signal timings
4	SH 35 at Hastings Canon Road	EBR	Adjust signal timings
5	Pearland Pkwy at Hughes Road	Second SBL, second WBL	Adjust signal timings
6	Pearland Pkwy at FM 518	EBR, NBR, SBR	Adjust signal timings
7	Pearland Pkwy at John Lizer Road	Widen John Lizer Road to 4-lane east of Pearland Pkwy	Remove Split Phase
8	Pearland Pkwy at Dixie Farm Road	WBR	

EBR = Eastbound Right-turn bay WBR = Westbound Right-turn bay NBL = Northbound Left-Turn Bay
SBR = Southbound Right-turn bay NBR = Northbound Right-turn bay SBL = Southbound Left-Turn Bay

Independence Park Improvements



Issue:

There are no sidewalks leading up to the existing trails leading up the Independence Park.

Recommendation:

Widen the called-out segment of John Lizer Road to a four-lane roadway to improve traffic capacity and install sidewalks along the south side of John Lizer Road as a continued sidewalks connection from the western residential neighborhood to Independence Park.

bility

Houston-Galveston Area Council

At-Grade Rail Crossing Improvements

Walnut St Crossing



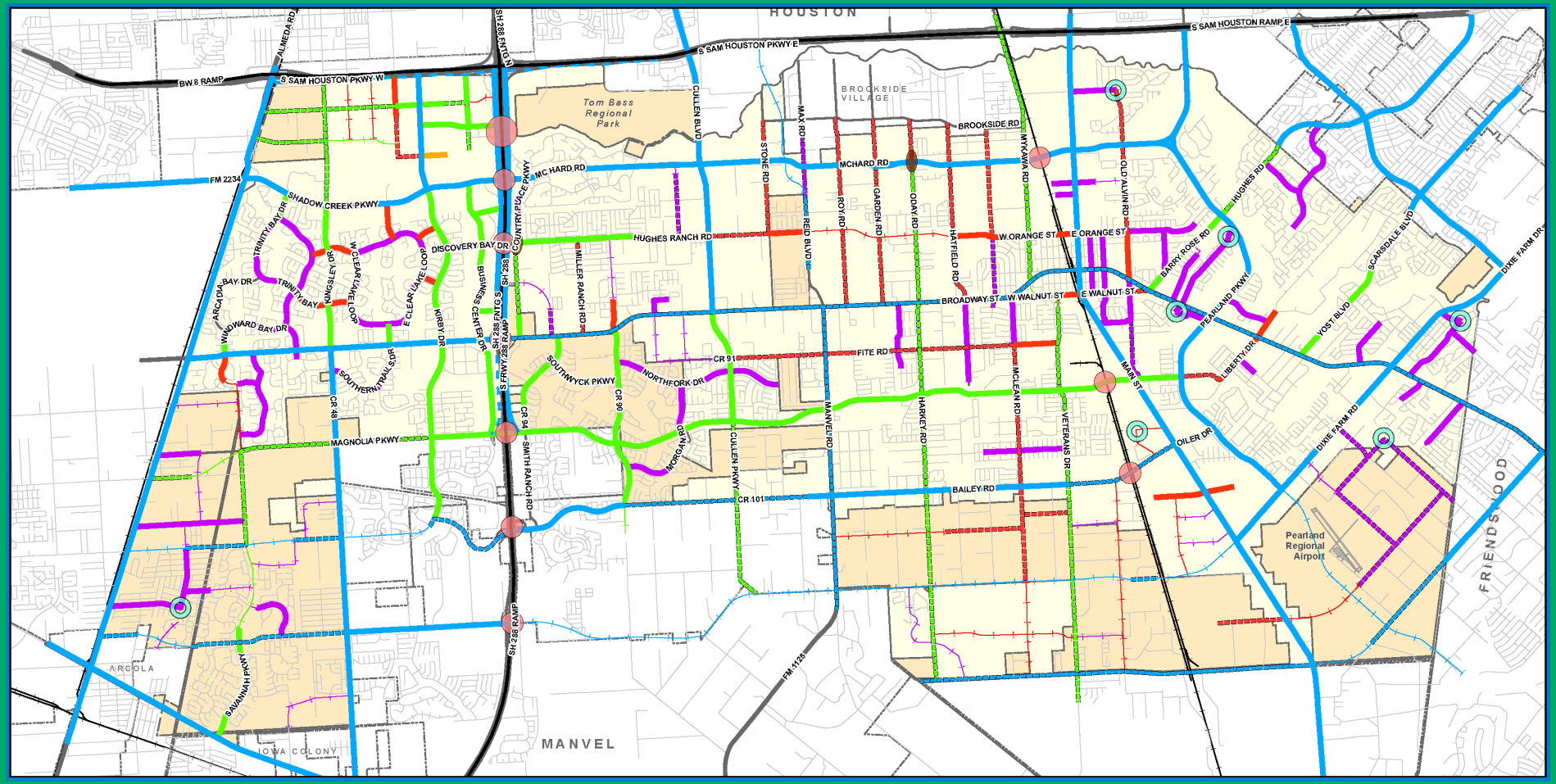
Houston-Galveston Area Council

Long-Term Recommendations (11+ Years)



- Thoroughfare Plan Updates
  - Travel Demand Modeling Results
- Recommended Widenings and Proposed Connections

Existing Thoroughfare Plan



CITY OF PEARLAND
THOROUGHFARE PLAN

Plan Approved: 9 AUG 2021
(Ord 1517-4)

120' Minimum ROW
- Major Thoroughfares - Sufficient Width
- Major Thoroughfares - To Be Widened
- Major Thoroughfares - To Be Acquired
- Major Thoroughfares - Proposed Frontage Road
- Freeway

100' Minimum ROW
- Secondary Thoroughfares - Sufficient Width
- Secondary Thoroughfares - To Be Widened
- Secondary Thoroughfares - To Be Acquired

Other
- Local Road - Special Designation

80' Minimum ROW
- Major Collector Streets - Sufficient Width
- Major Collector Streets - To Be Widened
- Major Collector Streets - To Be Acquired

60' Minimum ROW
- Minor Collector Streets - Sufficient Width
- Minor Collector Streets - To Be Widened
- Minor Collector Streets - To Be Acquired

- Proposed Grade Separation
- 15:1 R.O.W. Transition
- Collector Streets
- Street intersect at a right angle as part of a T or 4-way intersection
- Pearland City Limits
- Pearland ETJ

1 inch = 1 miles
0 0.5 1
Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: MAY 2023
CITY OF PEARLAND IT-GIS DEPARTMENT

Houston-Galveston Area Council

Travel Demand Model (TDM)

- Projected 2045 TDM based on existing Roadway Network

  "Pearland's traffic conditions in 2045 business as usual"

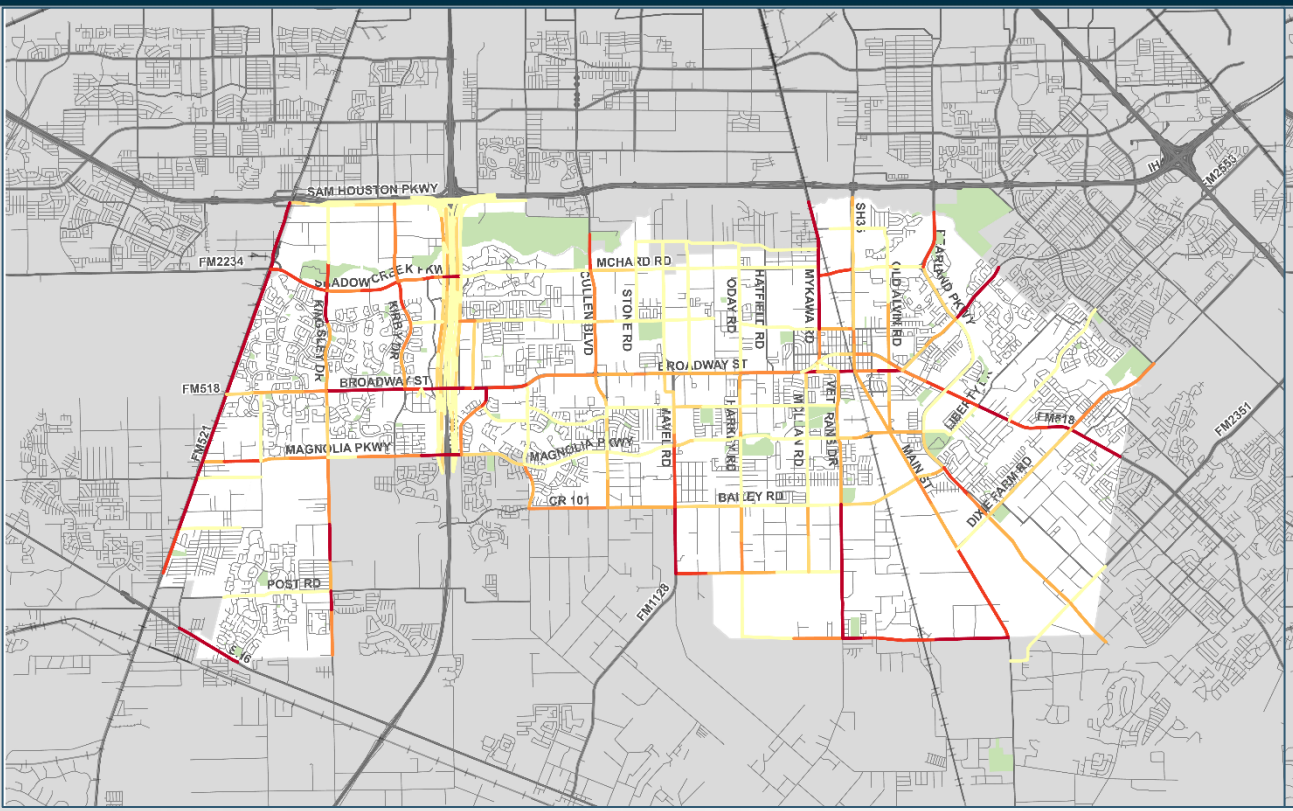
- Projected 2045 Travel Demand Model
  - Referenced the Future Land Use Plan (FLUP) from Pearland 2045 Comprehensive Plan

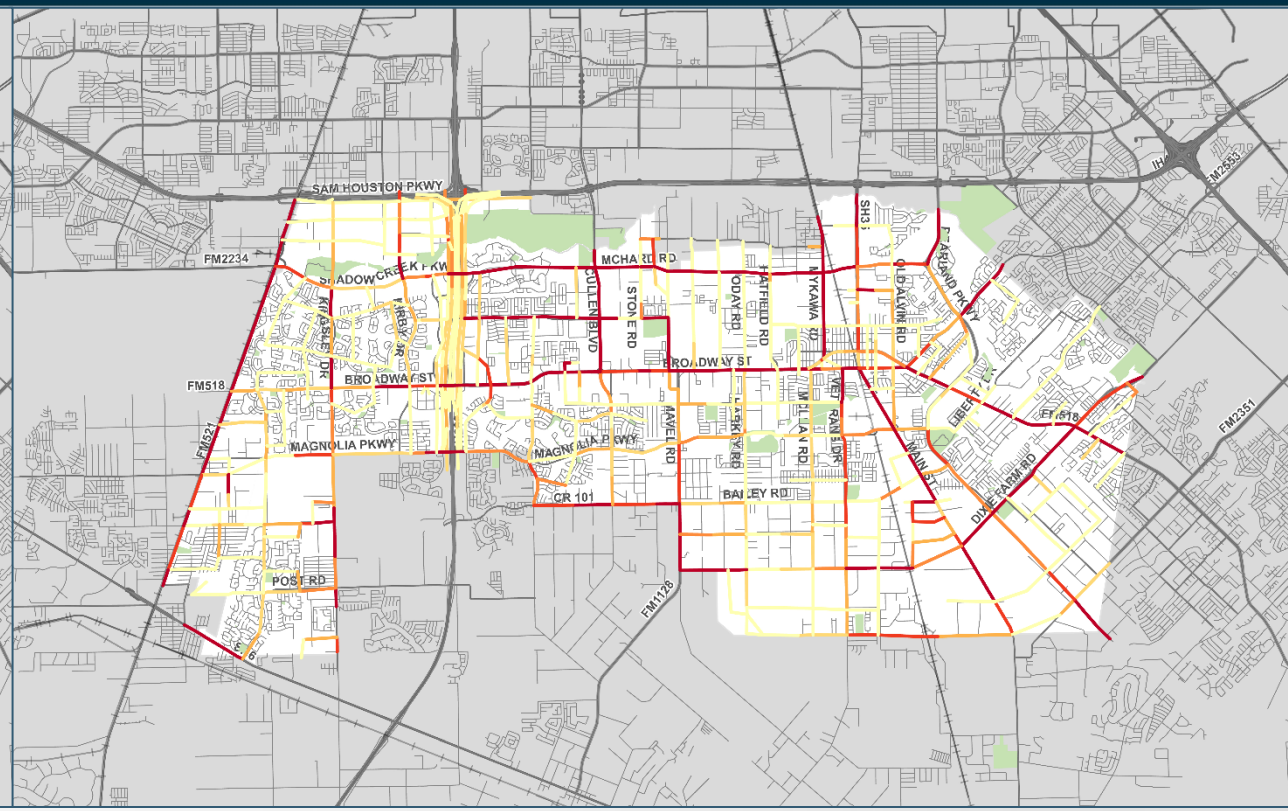
  "Pearland's traffic conditions in 2045 based on desired development patterns"

- Roadway Network Recommendations based on TDM

  "Recommendations to existing traffic conditions based on projections"

2045 V/C Ratio Scenario Comparison





Base TAZ demographics condition and initial road network from H-GAC TDM

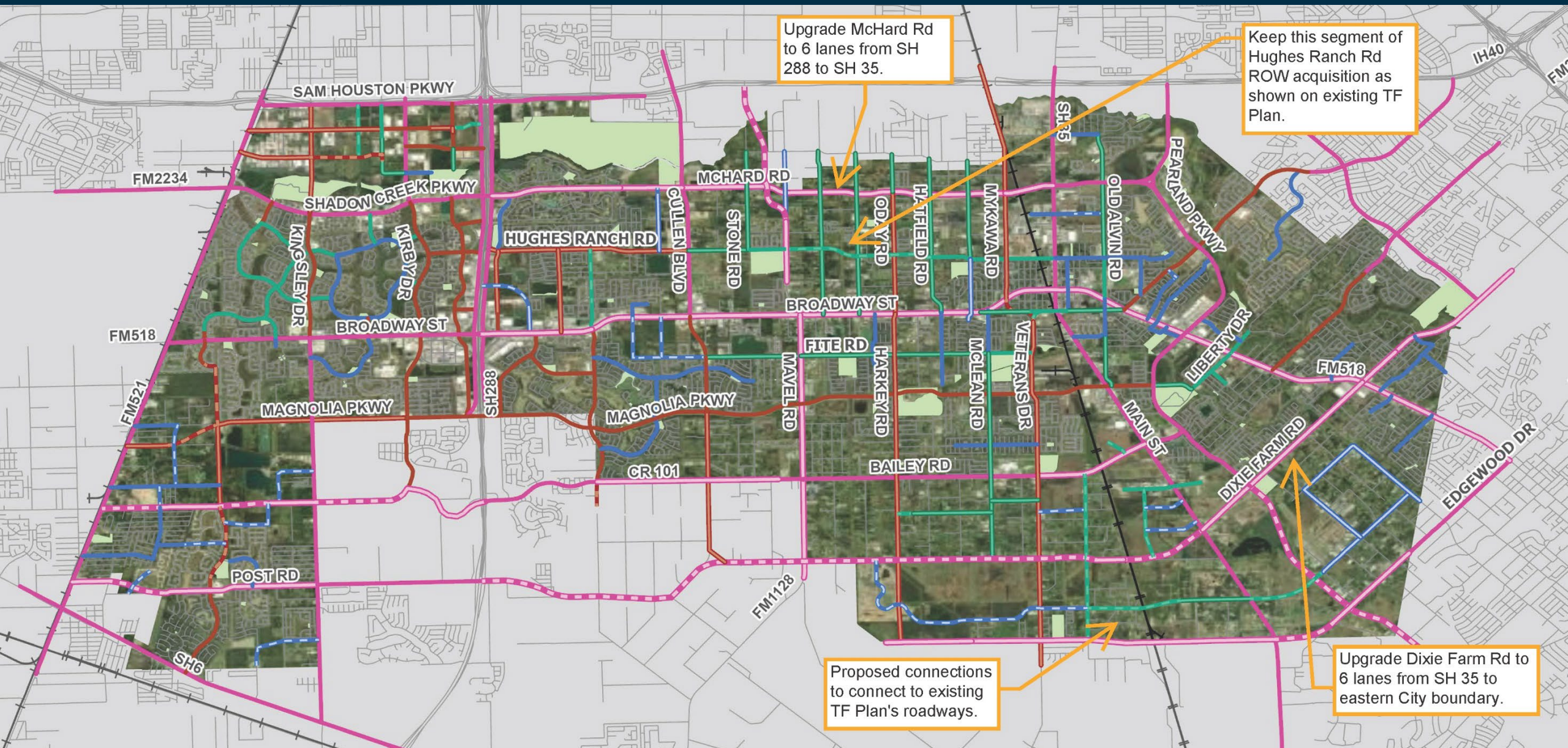
Updated TAZ demographics as per FLUP with Updated roadway network based on the City of Pearland Thoroughfare plan

Key Roadways Recommendations

Roadway (2045 V/C with FLUP)	2023	2045	Recommendation
Veterans Drive (V/C ~ 0.9)	**2 lanes**	**Secondary Thoroughfare – 4 lanes**	Follow Current TF Plan: 100' Minimum Thoroughfare - To be Widened
Dixie Farm Road (V/C ~ 1.0)	**4 lanes**	**Major Thoroughfare – 4 lanes**	Upgrade to 6 Lanes
McHard Road (V/C ~ 1.3)	**4 lanes**	**Major Thoroughfare – 4 lanes**	Upgrade to 6 lanes between SH 288 and SH 35
Broadway Street (V/C ~ 1.2)	**4 lanes**	**Major Thoroughfare – 6 lanes**	TxDOT plans in place to be widened up to 150 feet with 6 lanes
Hughes Ranch Road (Between Reid Blvd and Hatfield Rd.	**To be acquired**	**Minor Collector – 4 lanes**	Remain in the updated Thoroughfare Plan as To Be Acquired

Houston-Galveston Area Council

Proposed Thoroughfare Recommendations



Policy Review – Short Term Recommendations

Recommendations for Pearland Code of Ordinances

Regulation Document	Location in Document	Item	Preliminary Suggested Change: Keep, Revise, Remove	Reason for Change
Engineering Design Criteria Manual	Sections 1.8.2, 1.8.3, 1.8.4	Construction Procedure Requirements	**Revise**	RE-examine required time for notices, consider increasing notice timeframe to accommodate staff availability
Engineering Design Criteria Manual	3.5	EXTRA TERRITORIAL JURISDICTION	**Revise**	Include language pertaining to S.B. 2038, which went into effect on September 1, 2023, generally authorizes residents of a city's extraterritorial jurisdiction ("ETJ") to petition for removal from the city's ETJ under certain circumstances. Chapter 6 of Design Manual was updated last in October 2020
Engineering Design Criteria Manual	6.1.2	ROADWAY DESIGN CRITERIA - roadside ditches	**Revise**	"New street construction that utilizes roadside ditches for storm water drainage is discouraged and must receive specific approval of the City." - Clarify departments or authoritative department
Engineering Design Criteria Manual	6.1.5	deviations from these design criteria	**Revise**	On a case-by-case basis the City of Pearland reserves the right to allow deviations from these design criteria. - specify responsible party
Engineering Design Criteria Manual, Pearland Thoroughfare Plan (prepared in July, 2015)	6.3. and 6.4 (Design Manual)	Thoroughfare, Roadway Classifications	**Revise**	Differences between the 2014 Thoroughfare Plan, and the classifications shown on 6.3 ROADWAY CLASSIFICATIONS

Next Steps



- 2nd Public Meeting
- Online Engagement




Thank You!




Regional Collaboration • Transportation Planning • Multimodal Mobility

H-GAC
Houston-Galveston Area Council

Questions?



- Qun Zhao – H-GAC Project Manager

  Qun.Zhao@h-gac.com

  832-681-2580

- Carlene Mullins – H-GAC Deputy Project Planner

  Carlene.Mullins@h-gac.com

  832-681-2585

Kimley»Horn

Pearland Mobility Study
February 5, 2024, 3:30 PM
Pearland City Hall Annex
3523 Liberty Dr, Pearland, TX 77581
Agenda: Thoroughfare Updates

Attendees:

Organization	Attendee	Role	Organization
Steering Committee Members	Qun Zhao	Project Manager	H-GAC
	Rajendra Shrestha	City Engineer	City of Pearland
	Yolci Ramirez	Traffic Engineer	City of Pearland
	Martin Griggs	Community and Development Deputy Director	City of Pearland
Consultants	Mike Feeney	Project Manager	Kimley-Horn
	Vivek Deshpande	Deputy Project Manager	Kimley-Horn
	Jenny Lai	Planner	Kimley-Horn
	Linc Wright	Sub-Consultant	Gradient

ACTION ITEMS FOR PEARLAND MOBILITY STUDY

H-GAC:

- Sub-consultant, Reddy from HDR will contact Qun for the updated Travel Demand Model

City of Pearland:

- Send the list of Thoroughfare plan updates from meeting discussions and supporting documents about changes when possible
- Send Kimley-Horn locations that have received community requests for bike connections
- Send Kimley-Horn updates/recommendations from City's ongoing ITS Study

Kimley-Horn:

- Mike F. to contact CDM Smith about synchro files from the previous mobility study

DISCUSSION NOTES:

1. Rajendra S. (Raj), Yolci, and Martin went through the changes to the existing Thoroughfare Plan Map during the meeting
    a. The City to send Kimley-Horn the list of Thoroughfare Plan updates and supporting documents
    b. The City has not compared updates to Brazoria County's existing Thoroughfare Plan or planned updates

2. Bike and Pedestrian Path network
    a. Raj mentioned that he has received community requests for bike signage and upgrades along Cullen Pkwy, Magnolia Pkwy
    b. Raj to send Kimley-Horn locations that have received community requests for bike connections

3. Critical Corridors
    a. Shadow Creek Pkwy, from FM 521 to SH 288
    b. Main Street, from FM 518 to Dixie Farm Rd
    c. Mike will examine the two locations above first with sub-consultant, Linc Wright from Gradient Group, before looking at other potential critical corridors

4. High-Level Project Discussion
    a. For the critical corridors, Mike stated that we should study locations that will not be covered by TxDOT's Broadway Street study, nor the FM 518 Corridor study's scope
    b. This project should provide a definition to each type of street, ie. What is a collector street, what is an arterial street
    c. Yolci and Raj mentioned that the City's ITS study has already begun, Vivek mentioned that the Pearland Mobility Study will try to echo some of the findings/recommendations from that report. The City to share findings of the report when ready.

Pearland Mobility Study

Existing Thoroughfare Plan

MAP PREPARED: February 2024

120' Major Thoroughfares
- Sufficient Width
- To Be Acquired
- To Be Widened

100' Major Collectors, Thoroughfares
- Sufficient Width
- To Be Acquired
- To Be Widened

80', Minor Collectors
- Sufficient Width
- To Be Acquired
- To Be Widened

60', Minor Collectors
- Sufficient Width
- To be acquired
- To Be Widened

CITY OF PEARLAND TEXAS EST. 1894

N

0 0.88 1.75 3.5
Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

Pearland Mobility Study

Existing Thoroughfare Plan

MAP PREPARED: February 2024

120' Major Thoroughfares
- Sufficient Width
- To Be Acquired
- To Be Widened

100' Major Collectors, Thoroughfares
- Sufficient Width
- To Be Acquired
- To Be Widened

80', Minor Collectors
- Sufficient Width
- To Be Acquired
- To Be Widened

60', Minor Collectors
- Sufficient Width
- To be acquired
- To Be Widened

0 0.88 1.75 3.5
Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

Kimley»Horn

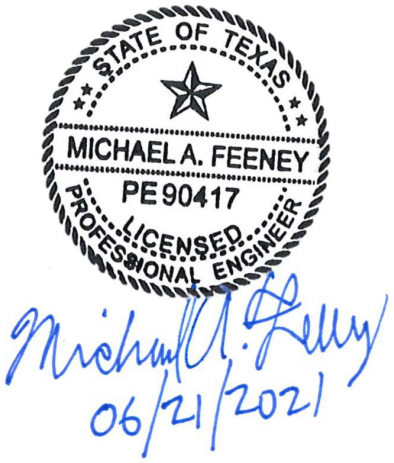
TECHNICAL MEMORANDUM

To: Ryan McKinnis, P.E.
Assistant Director of Traffic - Engineering and Capital Projects
City of Pearland
2559 Hillhouse
Pearland, Texas 77584

From: Michael A. Feeney, P.E., FITE
Kimley-Horn and Associates, Inc.
Firm Number F-928

Date: June 21, 2021

Subject: ***City of Pearland Thoroughfare Plan Update***



INTRODUCTION

The purpose of this memorandum is to provide an analysis of roadway alignments within two specific study areas of the City of Pearland's Thoroughfare Plan. This update includes a brief description of the project, an overview of the methodology used, and recommendations for future changes. A revised Thoroughfare Plan map is provided, based on the recommendations.

PROJECT DESCRIPTION

The current City of Pearland Thoroughfare Plan was approved on February 26, 2018, through Ordinance number 1517-2. Several of the proposed alignments on the Thoroughfare Plan are identified as "to be acquired" and "to be widened," indicating that right-of-way (ROW) is still needed for future construction. As development continues throughout the two study areas, it is a crucial time to reanalyze the necessity of the future roadways.

Using outputs from the Houston-Galveston Area Council (H-GAC) travel demand model, existing and future land uses, existing ROW and parcel maps, and existing barriers, an analysis was performed of the alignments in two study areas within the City of Pearland. Those study areas are identified on ***Exhibit 1*** and are defined as:

- **Study Area 1:** bounded by South Freeway 288 on the west, Sam Houston Tollway to the north, Telephone Road to the east, and Broadway Street/FM 518 to the south.
- **Study Area 2:** bounded by Almeda School Road/Kingsley Drive to the west, Sam Houston Tollway to the north, South Freeway 288 to the east, and Shadow Creek Parkway to the south. This area is also referred to as the Lower Kirby District; a "Lower Kirby Urban Center Master Plan and Implementation Strategy" was completed for the area in 2011.

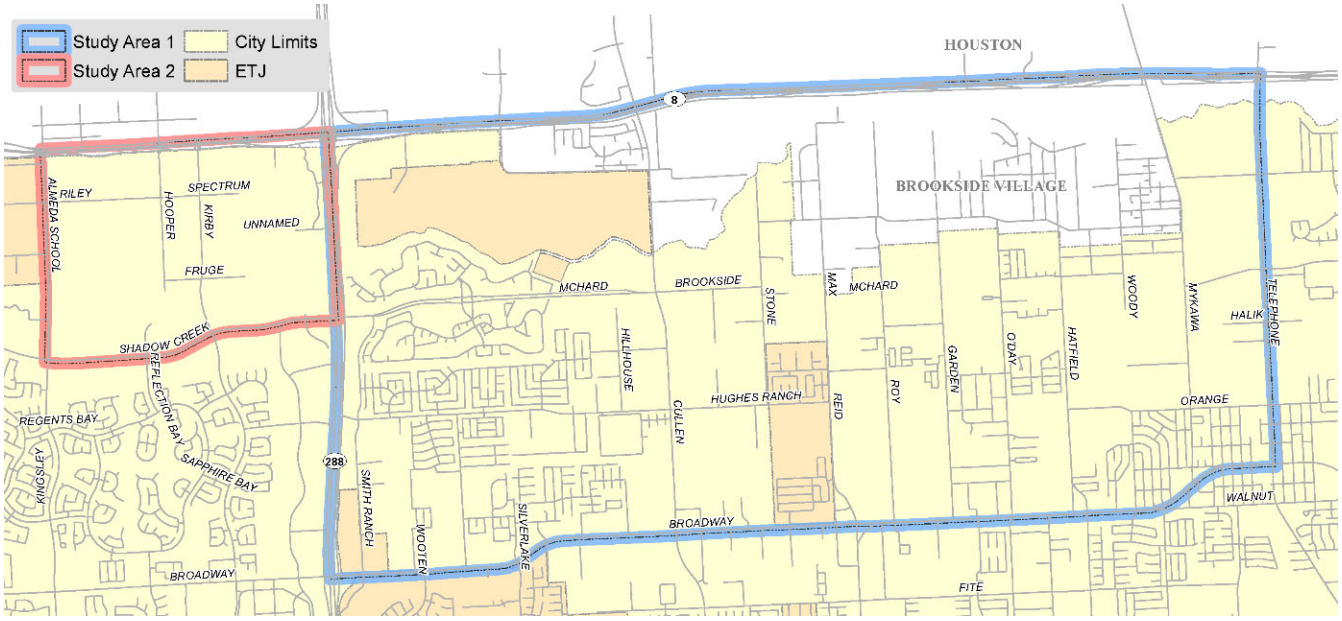


Exhibit 1 – Study Areas

Potential changes to each area's roadways included:

- No change
- Status change
- Higher order roadway classification
- Lower order roadway classification
- Realignment
- Removal from plan

Classifications for roadways, as defined in the City of Pearland's Engineering Design Criteria Manual are:

- Major Thoroughfare
- Secondary Thoroughfare
- Major Collector
- Minor Collector
- Local

Roadway statuses, as identified on the City of Pearland's Thoroughfare Plan are:

- **Sufficient width** – where sufficient minimum ROW has been acquired to satisfy the requirements of the identified classification
- **To be widened** – where some ROW has been acquired, but requires more to satisfy the requirements of the identified classification
- **To be acquired** – where no ROW has been acquired

DATA COMPILATION

Data was collected to analyze existing and future traffic and land use conditions. Data used includes:

- Geographic Information Systems (GIS) data, as downloaded from the City of Pearland website, including:
  - Existing Thoroughfare Plan alignments
  - Zoning
  - Administrative boundaries
  - Subdivision and streets

- City of Pearland's interactive GIS map provided information on existing parcels and ROW widths
- The H-GAC 2040 travel demand model was supplied to the project team, which provides a future projection of traffic according to land use, roadway, and travel assumptions. Volume to capacity (v/c) ratios from the PM peak period, defined as 3:00 – 7:00 PM, were used in this analysis. These v/c ratios are provided as a decimal and indicate the capacity of the roadways to accept more traffic. Thresholds used in this analysis are as follows:
  - 0.16 – 0.65 indicate the roadway as under capacity, with the ability to handle more traffic
  - 0.651 – 0.85 indicate the roadway as nearing capacity, with the ability to handle only a little more traffic
  - 0.851 – 1.00 indicate the roadway as at capacity, with traffic conditions nearly unacceptable
  - 1.00 – 1.40 indicate the roadway as overcapacity, with unacceptable traffic conditions
- Recent roadway design/widening studies, as well as relevant Traffic Impact Analyses within the two study areas were also included as part of the data compilation and analysis, including:
  - Kingsley Drive Widening from South of Clear Creek North to Beltway 8
  - Max Road from Hughes Ranch Road to the Future Extension of McHard Road
  - Pearland Place Residential Subdivision – Traffic Impact Analysis
  - The Modern Green Ivy District – Traffic Impact Analysis

METHODOLOGY

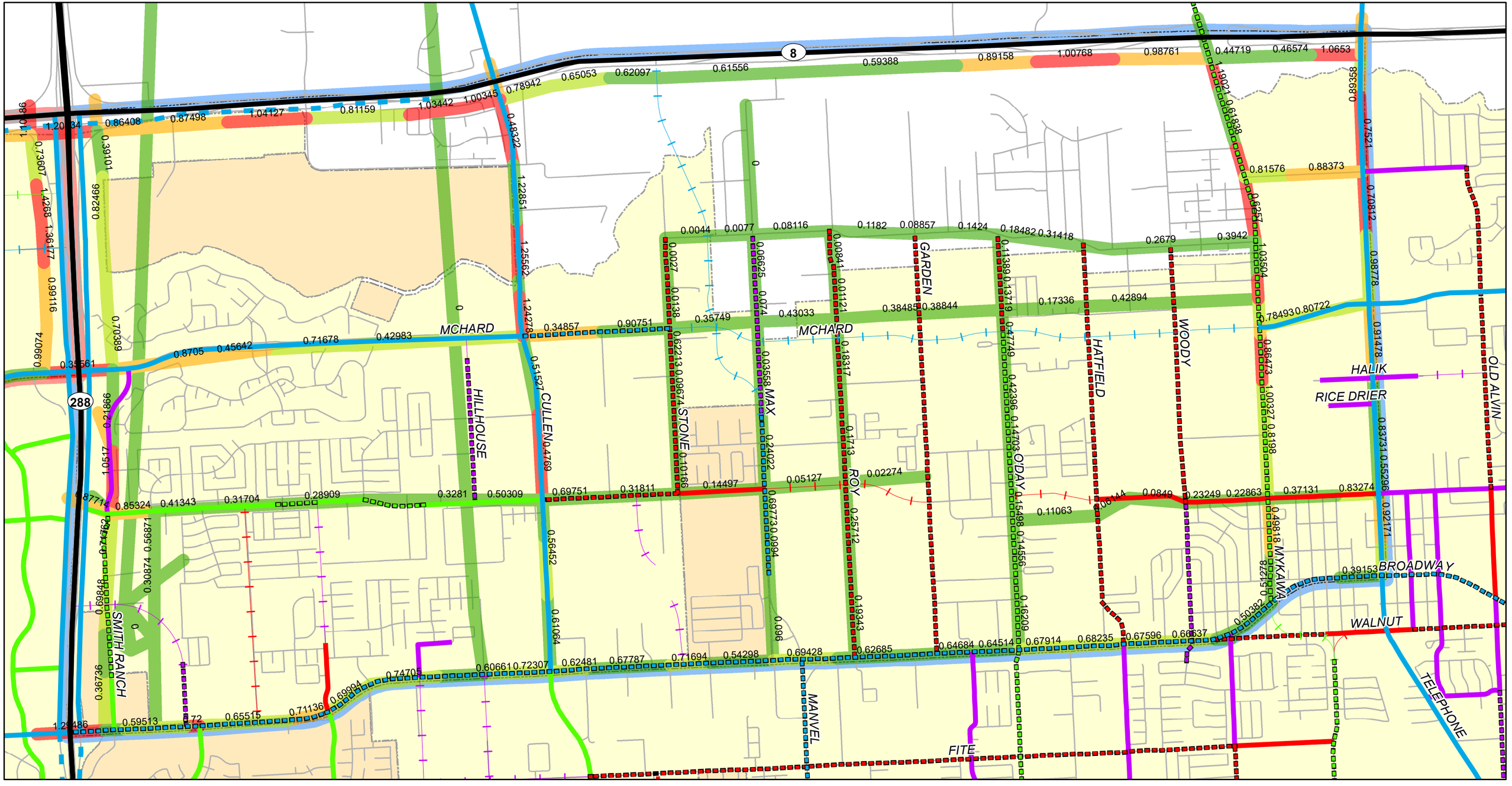
After all data was collected and categorized through a series of initial maps and reports, the project team performed a field visit on the morning of Thursday, October 24. The project team took photos throughout the two study areas, highlighting where existing conditions on the ground differed from what was shown in aerial photos. This included current land use development projects as well as current roadway projects.

The H-GAC travel demand model was then analyzed to show volume to capacity ratios for each roadway link. The links in the model do not always represent where streets exist, but rather where travel patterns are generally directed. These outputs can be found in ***Exhibits 2 and 3***. After v/c ratios were determined for each model link, they were analyzed to find the average v/c ratio for each link between Major Thoroughfares. Model outputs can be found in the ***Appendix***.

The H-GAC travel demand model is a regional model that is developed at a high-level analysis of the region. Local knowledge from the City of Pearland, including the Comprehensive Plan, was used to supplement the H-GAC regional data when analyzing future traffic needs.

Using the compiled data described above, as well as data collected in the field visit, the project team then analyzed the existing Thoroughfare Plan and generated recommendations through an analysis of the following factors:

- 2040 H-GAC travel demand model v/c ratios for the PM peak period
- Existing and known future development information
- Existing barriers
- ROW, parcel, and land use data



120' Minimum ROW

- Major Thoroughfares - Sufficient Width
- Major Thoroughfares - To Be Widened
- Major Thoroughfares - To Be Acquired
- Major Thoroughfares - Proposed Frontage Road
- Freeway

100' Minimum ROW

- Secondary Thoroughfares - Sufficient Width
- Secondary Thoroughfares - To Be Widened
- Secondary Thoroughfares - To Be Acquired

80' Minimum ROW

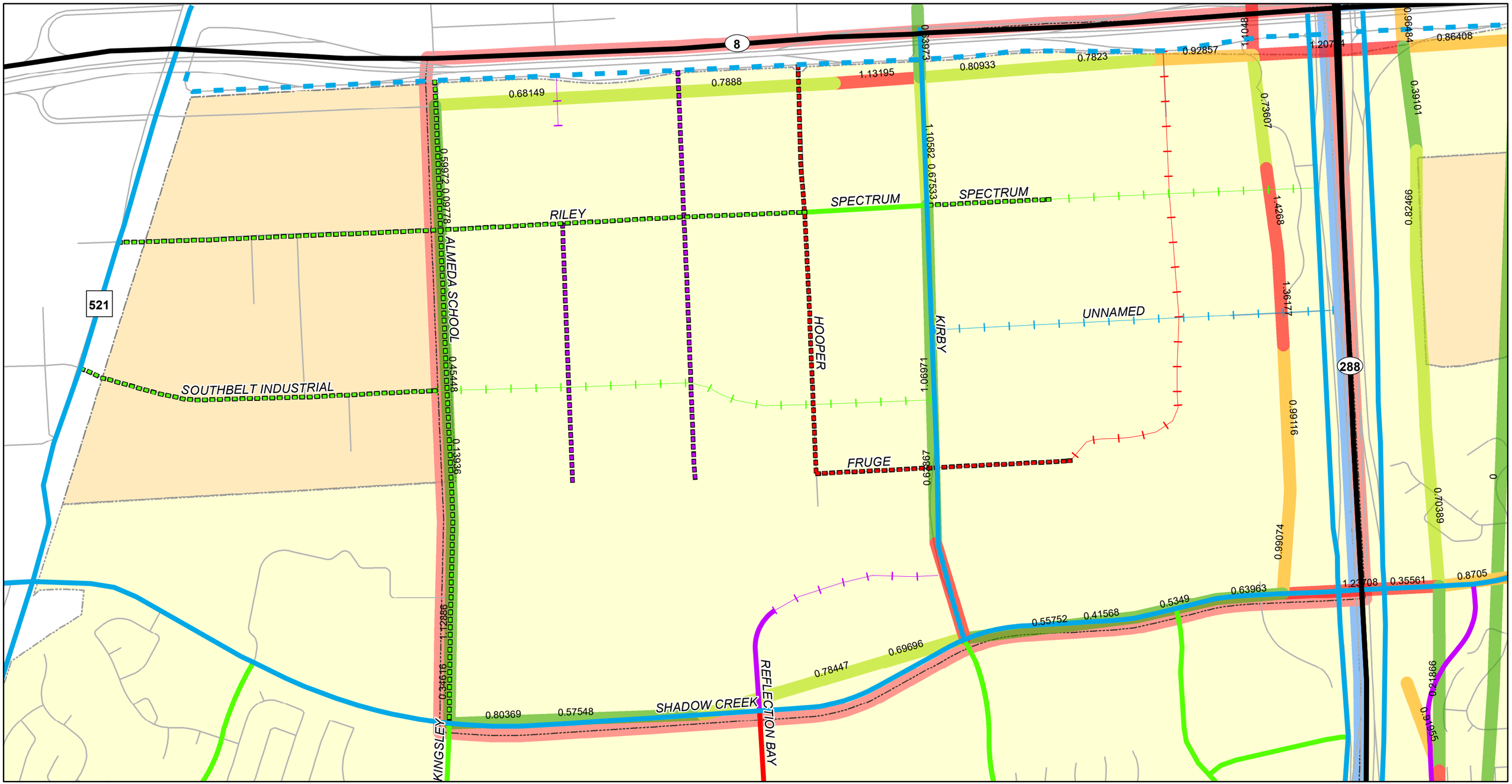
- Major Collector Streets - Sufficient Width
- Major Collector Streets - To Be Widened
- Major Collector Streets - To Be Acquired

60' Minimum ROW

- Minor Collector Streets - Sufficient Width
- Minor Collector Streets - To Be Widened
- Minor Collector Streets - To Be Acquired

- Study Area 1
- Study Area 2
- City Limits
- ETJ

Exhibit 2 - V/C Ratios, Study Area 1



120' Minimum ROW

- Major Thoroughfares - Sufficient Width
- Major Thoroughfares - To Be Widened
- Major Thoroughfares - To Be Acquired
- Major Thoroughfares - Proposed Frontage Road
- Freeway

100' Minimum ROW

- Secondary Thoroughfares - Sufficient Width
- Secondary Thoroughfares - To Be Widened
- Secondary Thoroughfares - To Be Acquired

80' Minimum ROW

- Major Collector Streets - Sufficient Width
- Major Collector Streets - To Be Widened
- Major Collector Streets - To Be Acquired

60' Minimum ROW

- Minor Collector Streets - Sufficient Width
- Minor Collector Streets - To Be Widened
- Minor Collector Streets - To Be Acquired

- Study Area 1
- Study Area 2
- City Limits
- ETJ

Exhibit 3 - V/C Ratios, Study Area 2

RECOMMENDATIONS

Recommendations for the City of Pearland Thoroughfare Plan are summarized below. ***Exhibits 4 and 5*** indicate in light yellow where changes to the existing Plan are recommended. ***Exhibits 6 and 7*** show the final Thoroughfare Plan with all recommendations implemented.

Study Area 1

Wooten Road

This proposed Minor Collector is recommended to remain on the Thoroughfare Plan as-is.

Wooten Road is identified as “to be widened” from Broadway Street to Lamb Brook Lane, and “to be acquired” from Lamb Brook Lane west to Highway 288. The volume-to-capacity (v/c) ratios in the nearby area are overall under capacity, however, being near the intersection of Highway 288 and Broadway Street/FM 518, there are significant delays along the immediate stretch of roadway. There will be many people trying to avoid the intersection, and another option to access Highway 288 would be beneficial.

The current construction of Highway 288 does not provide for an access point, so the future construction of this roadway will need to be coordinated with the Texas Department of Transportation (TxDOT).



Miller Ranch Road

This proposed Major Collector is recommended to remain on the Thoroughfare Plan, with a status change to “to be widened”.

The current Thoroughfare Plan identifies Miller Ranch Road, between Silverlake Parkway and Smith Ranch Road, as “to be acquired”. Current parcel maps show that the right-of-way (ROW) along Miller Ranch Road varies but exists throughout the entire stretch. As ROW currently exists but will require additional ROW in the future for a Major Collector designation, it is recommended to change the status of Miller Ranch Road from “to be acquired” to “to be widened”.



Silverlake Parkway

This alignment is recommended for additional study pending the inclusion of nearby north-south corridors on the H-GAC travel demand model.

Silverlake Parkway has been constructed between Broadway Street and Eagle Crest Lane. An 80’ ROW width exists for this section. To the north of this section, ROW widths range between 60’ and 100’ and include offsets in geometry. In addition, the alignment crosses the Hickory Slough drainage artery and contains a north-south drainage ditch. It is adjacent to existing single-family homes and the Challenger Elementary School.

More information is needed to make a recommendation. The nearby north-south corridor of Miller Ranch Road is not included in the H-GAC regional traffic demand model. The City of Pearland should coordinate with H-GAC to include this route on their model. Once the roadway has been included, more information will be available to better analyze future transportation needs and provide a recommendation.



Unnamed Minor Collectors

Remove the Minor Collectors from the Thoroughfare Plan.

Between Cullen Boulevard and Max/Reid Road and Broadway Street and Hughes Ranch Road, two north-south unconnected segments of a proposed Minor Collector are identified as “to be acquired”. The proposed alignment would serve a very small area and would not significantly relieve adjacent streets of traffic. Traffic projections for 2040 indicate that both Cullen Boulevard and Max/Reid Road have additional capacity. The proposed Minor Collector segments also traverse existing single-family residential homes, land owned by a cemetery, and a drainage parcel, in addition to a major drainage ditch that is also identified as a floodway and in the 100-year floodplain.



Max/Reid Road

The extension of existing Major Thoroughfare Max Road to Beltway 8 is recommended to remain on the Thoroughfare Plan.

The existing north-south thoroughfares, Cullen Boulevard and Mykawa Road will be burdened by future traffic, as identified by the projections for 2040. Widening Cullen Boulevard is infeasible due to the existing cemeteries on either side of the roadway. Making a connection from Max Road to the frontage roads along Beltway 8 will provide relief for the parallel north-south connections.



Hughes Ranch Road

Maintain the existing alignment on the Thoroughfare Plan and add a section between Garden Road and O'Day Road to provide continuous connectivity.

Currently, there is vacant or low-density development in many portions of the immediately adjacent study area. The Comprehensive Plan identifies the future land use in the area of Garden Road and O'Day Road to be a Mixed-Use District, with density greater that what currently exists, that surrounds low-density residential. Additional future density and traffic generators in the area will require additional connectivity. Without additional west-east connectivity in this location, the additional traffic will move to either McHard Road or Broadway Street/FM 518, as well as the adjacent north-south roadways, burdening the adjacent roadway network. Although current v/c ratios show additional capacity on those streets, future growth that has not been accounted for in future models will likely further burden the area with traffic.

It is recommended to provide a complete continuous connection from existing Hughes Ranch Road to existing West Orange Street. This should be planned as a longer-term improvement, which would be dictated by future development needs. This connection would provide three east-west thoroughfares within 1.5 miles, as opposed to two.

An alignment analysis was completed as part of this study to examine the existing proposed alignment between Reid Boulevard and Hatfield Road. This connection would have obstacles for construction, with additional acquisition required for ROW. Three potential alignments were analyzed to find the least impactful alternative for future construction. Using a variety of impact measures, the alignment as it exists on the current Thoroughfare Plan was determined to be the least impactful and most cost-effective, using a planning-level analysis. A more detailed look at this analysis is provided in the ***Appendix***.

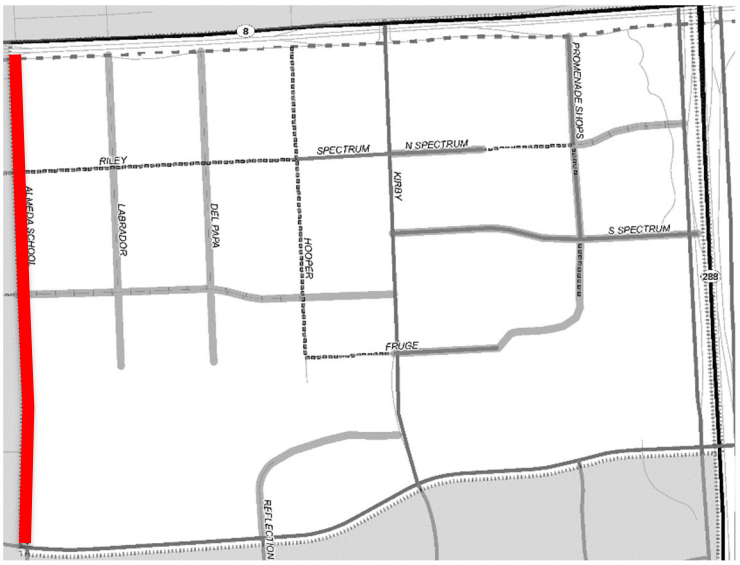


Study Area 2

Almeda School Road

Almeda School Road is recommended to remain on the Thoroughfare Plan as it currently exists.

No changes are recommended.

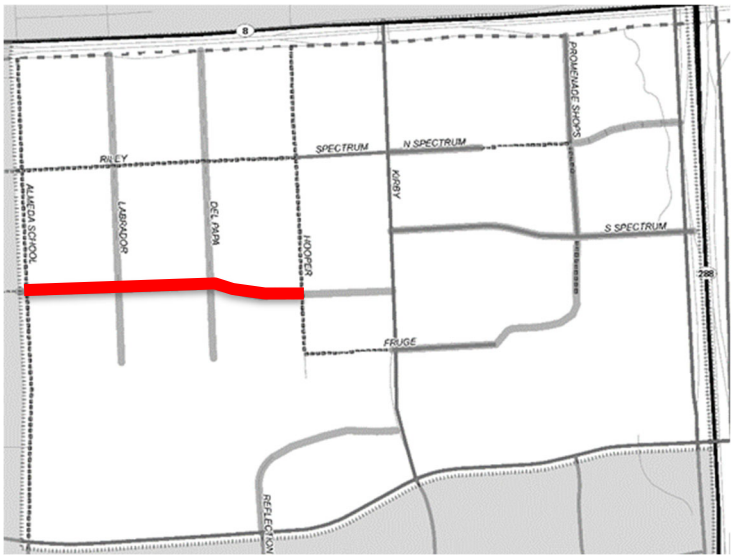


Southbelt Industrial Drive

Secondary Thoroughfare Southbelt Industrial Drive is recommended to terminate at Hooper Road and to be realigned.

The termination at Hooper Road and realignment of the Secondary Thoroughfare are recommended per plans provided by the Pearland Economic Development Corporation (PEDC).

The final alignment of this roadway should be coordinated between the City of Pearland, the Pearland Economic Development Corporation, and the Lower Kirby Pearland Management District, prior to construction of the roadway.



Fruge Road/Promenade Shops Drive, between Kirby Drive and South Spectrum Boulevard

Proposed Major Collector Fruge Road between Kirby Drive and South Spectrum Boulevard is recommended:

1. **To be downgraded to a Local Road – Special Designation from Kirby Drive to 1,300’ east of Kirby Drive**

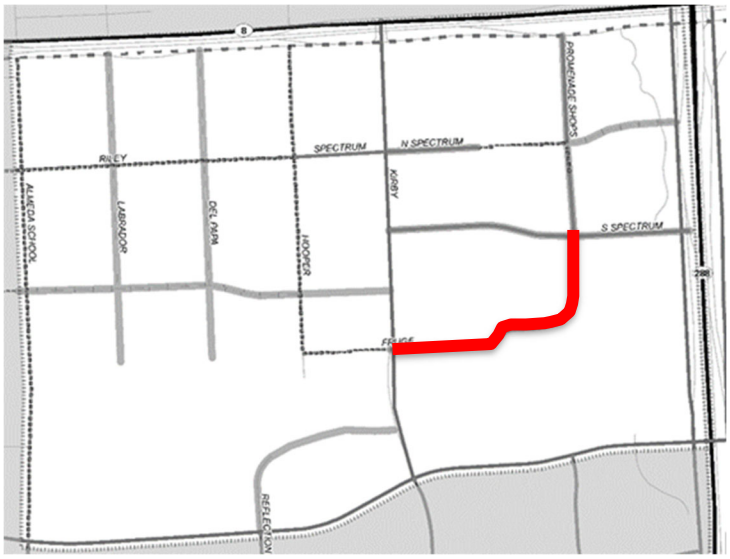
   Sixty feet (60’) of ROW for this portion of Fruge Road has been acquired just east of Kirby Drive through the platting process. This portion of Fruge Road is recommended to be downgraded to a Local Road – Special Designation, as the ROW exists, and this roadway will be needed for future activity in this area.

2. **To be removed between 1,300’ east of Kirby Drive to 800’ south of S Spectrum Boulevard**

   The Lower Kirby Pearland Management District (LKPMD) has purchased the parcel just east of the dedicated ROW and the LKPMD conveyance ditch, with the intention of providing additional drainage. In combination with the recent development and platting activity in the area, there are no opportunities to connect the existing ROW with the proposed north-south alignment of Promenade Shops Drive. This portion of Fruge Road is recommended to be removed from the Thoroughfare Plan.

3. **To be upgraded to a Secondary Thoroughfare between approximately 800’ south of S Spectrum Boulevard and S Spectrum Boulevard**

   Fifty feet (50') of ROW has been acquired through the platting process. Half of the boulevard section has been constructed as part of the Ivy District. This portion of Promenade Shops Drive is recommended to be upgraded to a Secondary Thoroughfare to have a final ROW width of 100’.



Promenade Shops Drive north of South Spectrum Boulevard

Proposed Major Collector Promenade Shops Drive is recommended to be upgraded to a Secondary Thoroughfare, with a status change to "sufficient width" where ROW is currently 100' and "to be widened" where there is insufficient ROW.

One hundred feet (100') of ROW has already been acquired along the alignment. There are small sections where the ROW is less than 100'; to have a consistent roadway section, the entire length should be upgraded to a Secondary Thoroughfare to ensure 100' of ROW along the entire section. Status should be changed to "sufficient width" where ROW is currently 100' and "to be widened" where there is less than 100' of ROW.



North Spectrum Boulevard

Proposed Secondary Thoroughfare North Spectrum Boulevard is recommended:

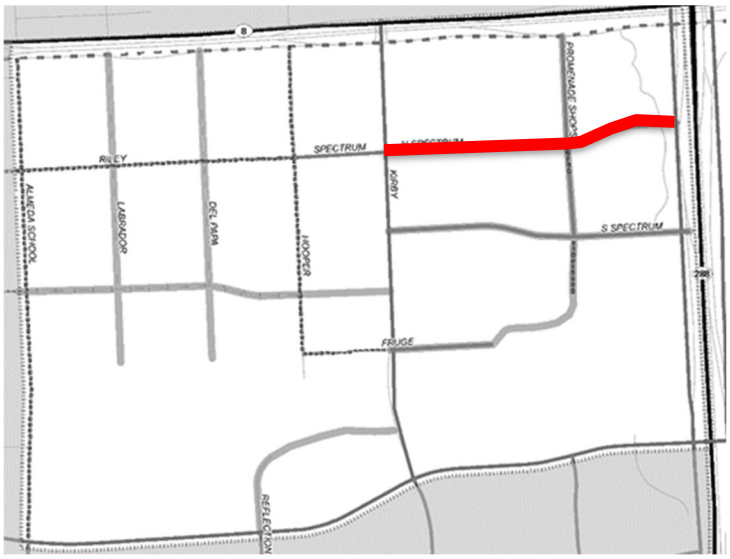
1. **To remain on the Thoroughfare Plan, with a status change to "sufficient width" where ROW is currently 100' and "to be widened" where there is insufficient ROW; from Kirby Drive to Promenade Shops Drive**

   Sufficient ROW has been acquired between Kirby Drive and the LKPMD conveyance ditch; some ROW has been acquired between the LKPMD conveyance ditch and Promenade Shops Drive. Status for these thoroughfare sections should be updated as appropriate.

2. **To be downgraded to a Major Collector from Promenade Shops Drive to SH 288, with a change in alignment to align with the existing connection to SH 288**

   The Lower Kirby Pearland Management District has confirmed that this segment should be downgraded to a Major Collector. There is an existing roadway connection to SH 288 and the proposed alignment has been revised to align with that connection.

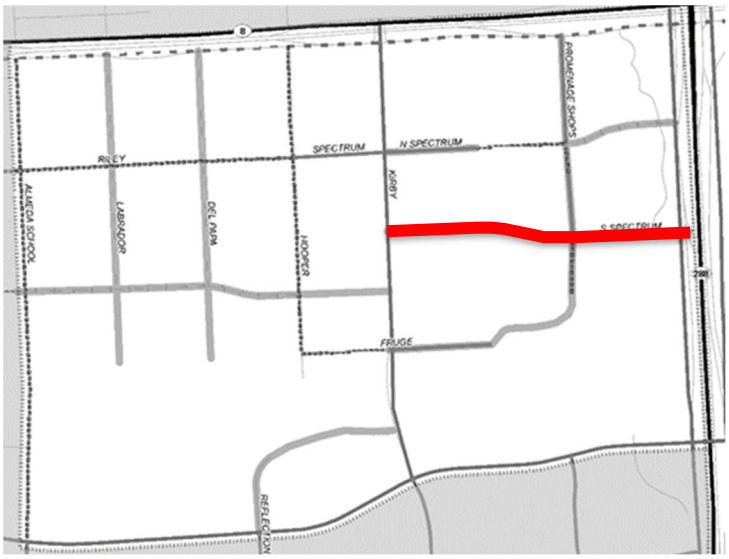
This alignment will provide an additional west-east connection throughout the study area. With growing congestion along the 288 frontage roads, and the recommendation to remove Fruge Road/Promenade Shops Drive south of S Spectrum Boulevard, this connection will provide an alternative route option.



South Spectrum Boulevard

Proposed Major Thoroughfare South Spectrum Boulevard is recommended to be downgraded to a Secondary Thoroughfare, with a realignment and a status change to "sufficient width".

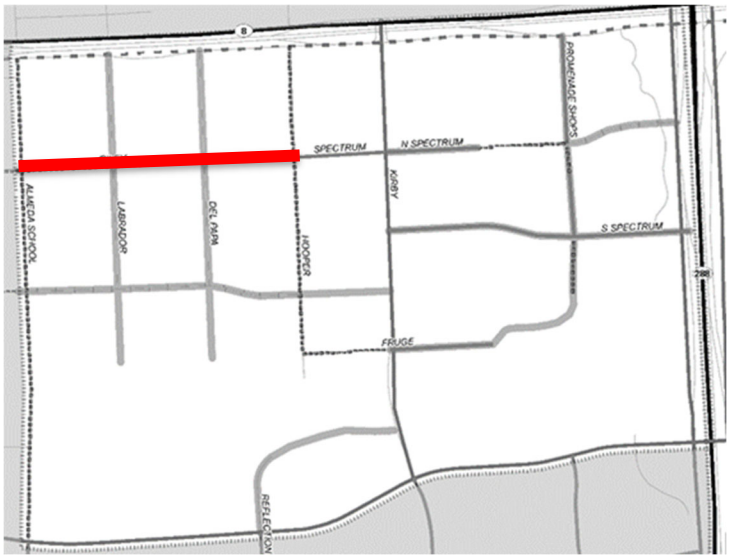
All required ROW for S Spectrum Boulevard has been dedicated and the roadway has been constructed. The existing ROW is 100' wide and corresponds to a Secondary Thoroughfare. The as-built alignment differs from the existing thoroughfare plan and should be realigned to reflect the new alignment. The status should be changed from "to be acquired" to "sufficient width".



Riley Road/Spectrum Boulevard (future North Spectrum Boulevard) west of Kirby Drive

Proposed Secondary Thoroughfare Riley Road/Spectrum Boulevard (future North Spectrum Boulevard) is recommended to remain on the Thoroughfare Plan.

This alignment provides a continuous connection from 521 to the feeder road at Highway 288 and will be helpful in providing relief from Beltway 8 and the feeder road for Highway 288.



Reflection Bay Drive

Proposed Minor Collector Reflection Bay Drive is recommended to be removed from the Thoroughfare Plan.

The v/c ratios for Kirby Drive indicate that the roadway will be over capacity south of Fruge Road. An additional intersection between Fruge Road and Shadow Creek Parkway would cause additional traffic conflicts. This intersection would likely meet warrants to include a traffic signal, resulting in two traffic signals within approximately 1,200 feet along Kirby Drive. Multiple traffic signals in a short segment introduce additional congestion issues. Additionally, this configuration would likely shift existing traffic from Kirby Drive and Shadow Creek Parkway to Reflection Bay Drive and Shadow Creek Parkway, as this segment would be attractive as a cut-through route.



Labrador Rd/Del Papa St

Proposed Minor Collector, Labrador Road, is recommended to extend to Riley Road. Proposed Minor Collector, Del Papa Street, west of Hooper Road, is recommended to terminate at Southbelt Industrial Drive. Both Minor Collectors are recommended to be upgraded to Major Collectors and change status to "to be acquired".



The Lower Kirby District is identified on the City of Pearland's Future Land Use Plan as the "Lower Kirby Urban Center". With the incoming development that is anticipated for this area, additional connectivity will be needed. Labrador Road is proposed to be extended south to Riley Road, where the ultimate roadway section will end at the intersection with proposed Southbelt Industrial Drive. Proposed Del Papa Street is recommended to change in alignment so that the ultimate roadway section will end at the intersection with Southbelt Industrial Drive. Both Minor Collectors are recommended to be upgraded to Major Collectors, per The City of Pearland Engineering Department. The Lower Kirby Pearland Management District has confirmed that ROW is to be acquired for both corridors.

SUMMARY

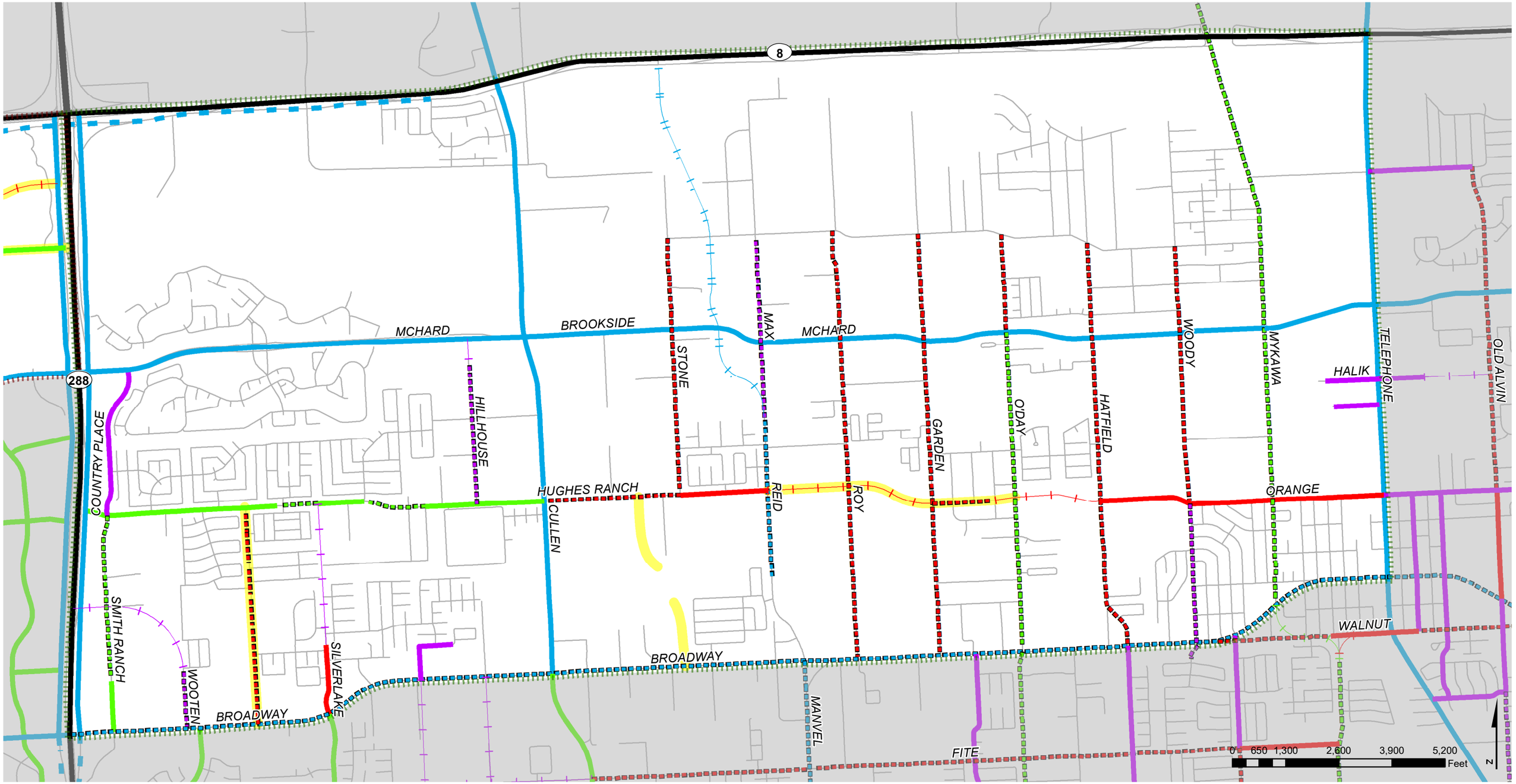
As development continues throughout the two study areas, the City of Pearland Thoroughfare Plan should be updated to reflect existing conditions and future transportation needs. A comprehensive planning analysis shows the need for some changes to the following roadways, as identified on the existing Transportation Plan:

Study Area 1

Roadway Name	*Type of Change*
• Miller Ranch Road	Status change
• Silverlake Parkway	Additional study
• Unnamed Minor Collectors	Removal
• Hughes Ranch Road	Extend

Study Area 2

Roadway Name	*Type of Change*
• Southbelt Industrial Drive	Realignment
• Fruge Road/Promenade Shops Drive, between Kirby Drive and S Spectrum Boulevard	Reclassification – downgrade; removal; reclassification – upgrade
• Promenade Shops Drive north of S Spectrum Boulevard	Reclassification – upgrade; status change
• N Spectrum Boulevard	Status change; reclassification – downgrade; realignment
• S Spectrum Boulevard	Reclassification – downgrade; realignment; status change
• Reflection Bay Drive	Removal
• Labrador Road/Del Papa Street	Extend; partial removal; reclassification – upgrade; status change



Study Area 1

Study Area 2

Recommended Change

120' Minimum ROW

Major Thoroughfares - Sufficient Width

Major Thoroughfares - To Be Widened

Major Thoroughfares - To Be Acquired

Major Thoroughfares - Proposed Frontage Road

Freeway

100' Minimum ROW

Secondary Thoroughfares - Sufficient Width

Secondary Thoroughfares - To Be Widened

Secondary Thoroughfares - To Be Acquired

Other

Local Road - Special Designation

80' Minimum ROW

Major Collector Streets - Sufficient Width

Major Collector Streets - To Be Widened

Major Collector Streets - To Be Acquired

60' Minimum ROW

Minor Collector Streets - Sufficient Width

Minor Collector Streets - To Be Widened

Minor Collector Streets - To Be Acquired

Exhibit 4 - Recommendations, Study Area 1



Study Area 1

Study Area 2

Recommended Change

120' Minimum ROW

- Major Thoroughfares - Sufficient Width
- Major Thoroughfares - To Be Widened
- Major Thoroughfares - To Be Acquired
- Major Thoroughfares - Proposed Frontage Road
- Freeway

100' Minimum ROW

- Secondary Thoroughfares - Sufficient Width
- Secondary Thoroughfares - To Be Widened
- Secondary Thoroughfares - To Be Acquired

Other

- Local Road - Special Designation

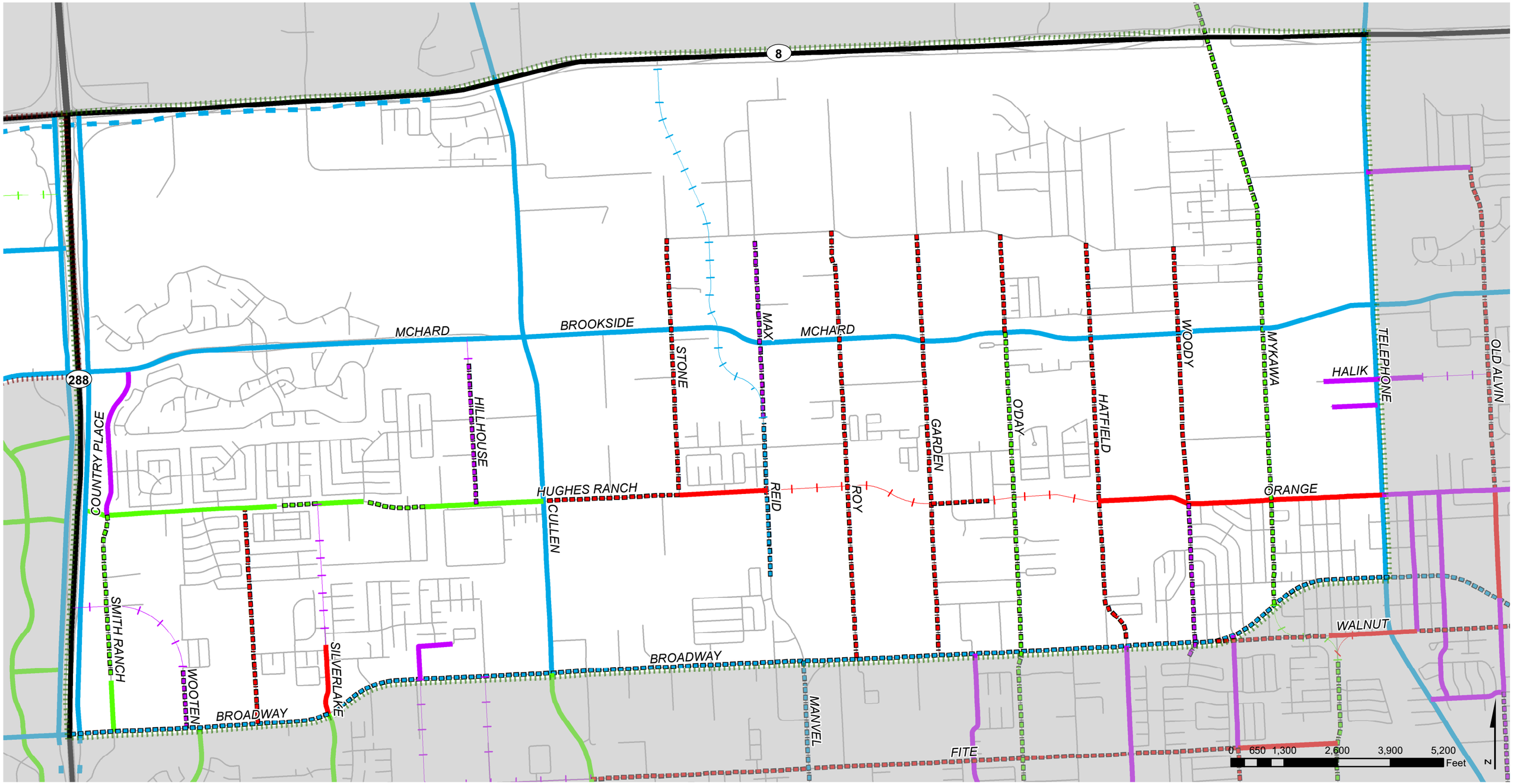
80' Minimum ROW

- Major Collector Streets - Sufficient Width
- Major Collector Streets - To Be Widened
- Major Collector Streets - To Be Acquired

60' Minimum ROW

- Minor Collector Streets - Sufficient Width
- Minor Collector Streets - To Be Widened
- Minor Collector Streets - To Be Acquired

Exhibit 5 - Recommendations, Study Area 2



Study Area 1

Study Area 2

120' Minimum ROW

- Major Thoroughfares - Sufficient Width
- Major Thoroughfares - To Be Widened
- Major Thoroughfares - To Be Acquired
- Major Thoroughfares - Proposed Frontage Road
- Freeway

100' Minimum ROW

- Secondary Thoroughfares - Sufficient Width
- Secondary Thoroughfares - To Be Widened
- Secondary Thoroughfares - To Be Acquired

Other

- Local Road - Special Designation

80' Minimum ROW

- Major Collector Streets - Sufficient Width
- Major Collector Streets - To Be Widened
- Major Collector Streets - To Be Acquired

60' Minimum ROW

- Minor Collector Streets - Sufficient Width
- Minor Collector Streets - To Be Widened
- Minor Collector Streets - To Be Acquired

Exhibit 6 - Final Thoroughfare Plan, Study Area 1



Study Area 1

Study Area 2

120' Minimum ROW

- Major Thoroughfares - Sufficient Width
- Major Thoroughfares - To Be Widened
- Major Thoroughfares - To Be Acquired
- Major Thoroughfares - Proposed Frontage Road
- Freeway

100' Minimum ROW

- Secondary Thoroughfares - Sufficient Width
- Secondary Thoroughfares - To Be Widened
- Secondary Thoroughfares - To Be Acquired

Other

- Local Road - Special Designation

80' Minimum ROW

- Major Collector Streets - Sufficient Width
- Major Collector Streets - To Be Widened
- Major Collector Streets - To Be Acquired

60' Minimum ROW

- Minor Collector Streets - Sufficient Width
- Minor Collector Streets - To Be Widened
- Minor Collector Streets - To Be Acquired

Exhibit 7 - Final Thoroughfare Plan, Study Area 2

APPENDIX

8
0.938298
0.796101
0.613287
0.834577
0.821675
0.844488
TELEPHONE
0.924849
1.101308
0.689622
0.442008
0.796075
0.618383
MCHARD
BROOKSIDE
STONE
MCHARD
GARDEN
O'DAY
WOODY
MYKAWA
HALIK
RICE DRIER
0.771234
0.182575
0.193932
MAX
ROY
HILLHOUSE
CULLEN
0.76042
288
0.653322
0.217152
HATFIELD
0.807767
0.605695
0.207996
ORANGE
0.506132
HUGHES RANCH
0.207996
REID
0.45542
0.537285
SMITH RANCH
0.703753
0.158471
WALNUT
0.640832
BROADWAY
SILVERLAKE
0.757608
BROADWAY
MANVEL
MCLEAN

Average V-C Ratio

- 0.16 - 0.65
- 0.65 - 0.85
- 0.85 - 1.00
- 1.00 - 1.40

Study Area 1

Study Area 2

Average V/C Ratios, Study Area 1

8

0.85374

0.938298

ALMEDA SCHOOL

RILEY

SPECTRUM

SPECTRUM

KIRBY

HOOPER

UNNAMED

521

0.46106

SOUTHBELT INDUSTRIAL

0.866318

1.101308

288

FRUGE

0.689622

MCHARD

0.618383

0.577549

SHADOW CREEK

REFLECTION BAY

COUNTRY PLACE

0.653322

KINGSLEY

EMERALD BAY

Average V-C Ratio

- 0.16 - 0.65
- 0.65 - 0.85
- 0.85 - 1.00
- 1.00 - 1.40

Study Area 1

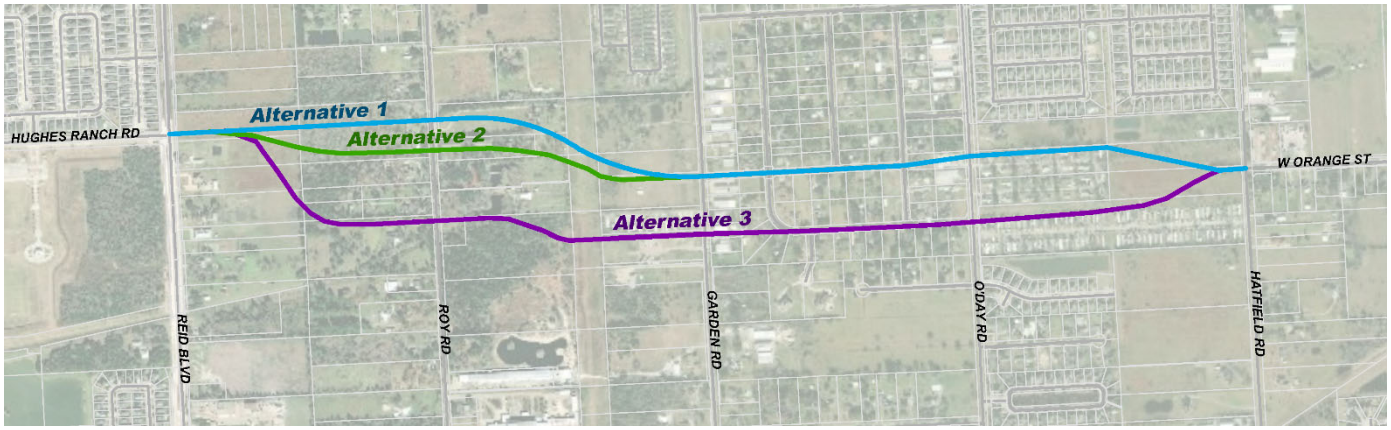
Study Area 2

Average V/C Ratios, Study Area 2

HUGHES RANCH ROAD ALIGNMENT ANALYSIS

Hughes Ranch Road, between Reid Boulevard and Hatfield Road, received additional analysis to consider alternative alignments to what currently exists on the Thoroughfare Plan. This segment is approximately 1.5 miles. Given the nature of this segment, with varying residential densities, existing roadway segments, and existing barriers to construction, this analysis was done to provide the least impactful possible route.

It was determined that three routes were feasible, given the existing development and barriers. The following exhibit depicts the three routes. Alternative 1 is the existing alignment on the Thoroughfare Plan (where it currently exists west of Garden Road and east of O'Day Road.)



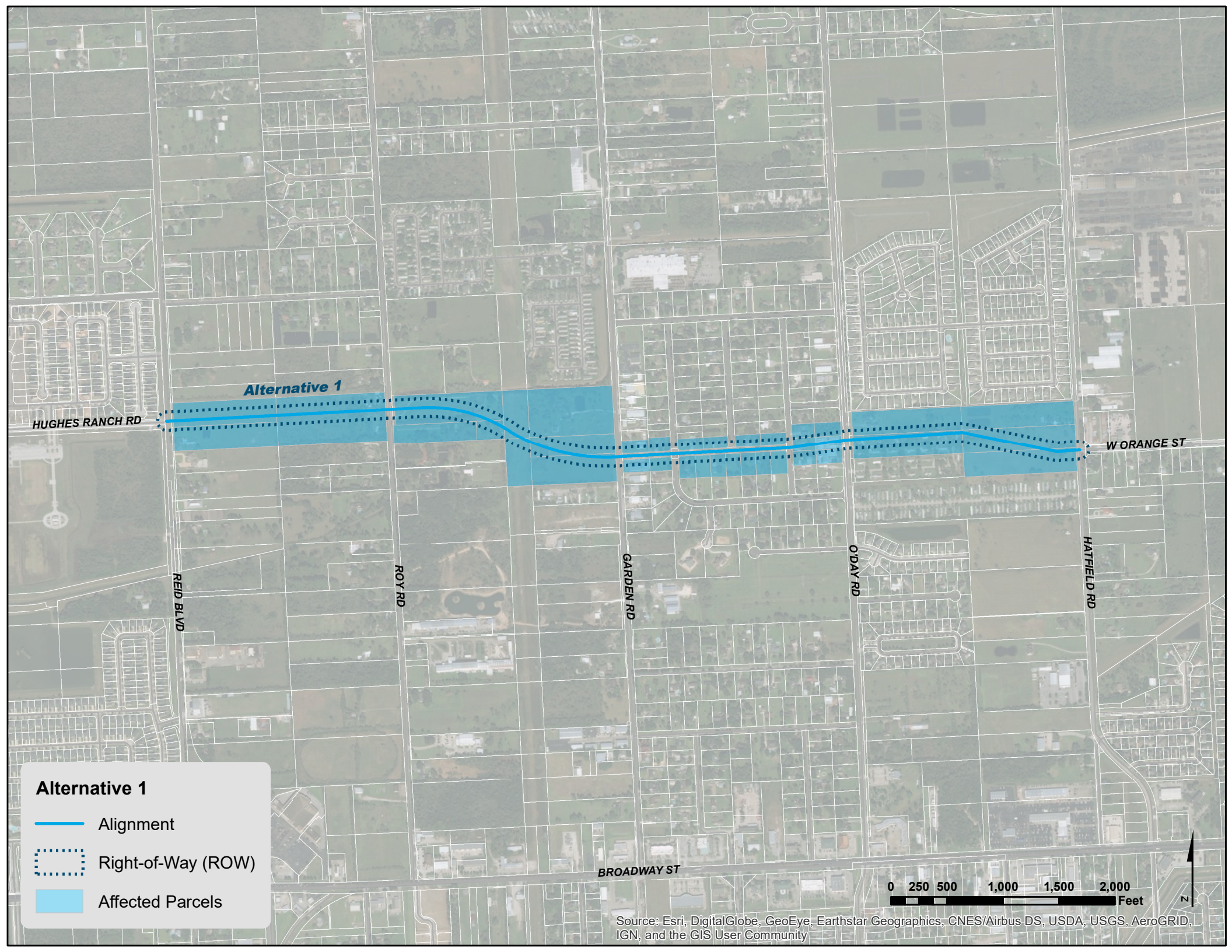
Assuming an 80' ROW width, the analysis compared the following measures of impact:

- Number of parcels affected
- Total area impacted in square feet
- Number of structures impacted
- Number of barriers (including detention ponds/waterways/electrical easements).

All three alignments crossed the same drainage ways and the Hickory Slough drainage ditch. These barriers were not included in the overall cost rating, as it was a comparative analysis.

The summarized output of the analysis and maps of the individual alternatives are provided below. These are generalized alignments and should not be used for anything other than planning-level assumptions.

	'Alternative 1'	'Alternative 2'	'Alternative 3'
Parcels (#)	◔	◔	◑
Area Impacted (SF)	◔	◔	◑
Property Impacted (#)	◔	◑	●
Barriers (#)	◔	◔	◑
Overall Impact (1-5)	◔	◔	◑


Alternative 1
HUGHES RANCH RD
W ORANGE ST
REID BLVD
ROY RD
GARDEN RD
O'DAY RD
HATFIELD RD
BROADWAY ST
Alternative 1
Alignment
Right-of-Way (ROW)
Affected Parcels
0 250 500 1,000 1,500 2,000
Feet
N
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


Alternative 2
HUGHES RANCH RD
W ORANGE ST
REID BLVD
ROY RD
GARDEN RD
O'DAY RD
HATFIELD RD
BROADWAY ST
Alternative 2
Alignment
Right-of-Way (ROW)
Affected Parcels
0 250 500 1,000 1,500 2,000
Feet
N
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


HUGHES RANCH RD
Alternative 3
W ORANGE ST
REID BLVD
ROY RD
GARDEN RD
O'DAY RD
HATFIELD RD
BROADWAY ST
Alternative 3
Alignment
Right-of-Way (ROW)
Affected Parcels
0 250 500 1,000 1,500 2,000
Feet
N
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Appendix B: Public Meetings and Online Outreach

Table of Contents

1st Round of Public Engagement Summary **1**

Engage HQ Online Outreach Results 20

2nd Round of Public Engagement Summary **77**

Engage HQ Online Outreach Results 93





Pearland Mobility Study
Public Engagement Meeting #1 Summary
(January – April 2024)





Regional Collaboration • Transportation Planning • Multimodal Mobility

H-GAC
Houston-Galveston Area Council

Executive Summary



- The Pearland Mobility Study – Kick-Off January 2024
- This document summarizes the results from the 1st round of public engagement

225 Survey Responses

740 Total Website Visits

163 Budget Prioritization Participants

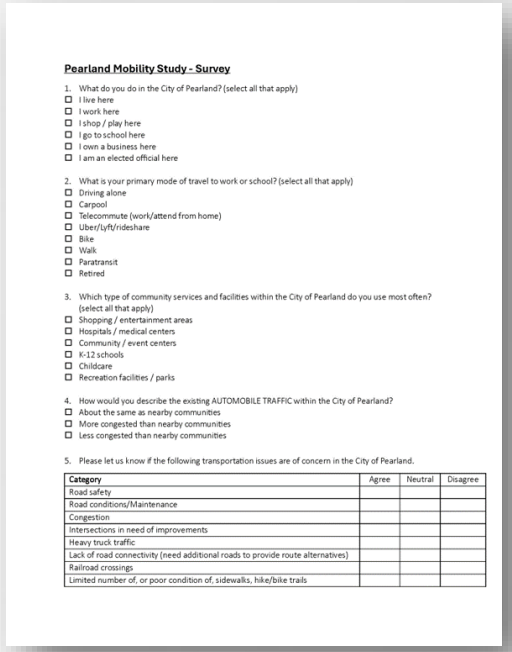
Engagement Content



- Project survey and budget prioritization activity – In-person at the Pearland Spring Fest and Online via Engage.H-GAC.com



The Budget Prioritization Activity was first introduced to the Stakeholder Group



Pearland Mobility Study - Survey

1. What do you do in the City of Pearland? (select all that apply)
   - ☐ I live here
   - ☐ I work here
   - ☐ I shop / play here
   - ☐ I go to school here
   - ☐ I own a business here
   - ☐ I am an elected official here
2. What is your primary mode of travel to work or school? (select all that apply)
   - ☐ Driving alone
   - ☐ Carpool
   - ☐ Telecommute (work/attend from home)
   - ☐ Uber/Lyft/rideshare
   - ☐ Bike
   - ☐ Walk
   - ☐ Paratransit
   - ☐ Retired
3. Which type of community services and facilities within the City of Pearland do you use most often? (select all that apply)
   - ☐ Shopping / entertainment areas
   - ☐ Hospitals / medical centers
   - ☐ Community / event centers
   - ☐ K-12 schools
   - ☐ Childcare
   - ☐ Recreation facilities / parks
4. How would you describe the existing AUTOMOBILE TRAFFIC within the City of Pearland?
   - ☐ About the same as nearby communities
   - ☐ More congested than nearby communities
   - ☐ Less congested than nearby communities
5. Please let us know if the following transportation issues are of concern in the City of Pearland.

Category	Agree	Neutral	Disagree
Road safety			
Road conditions/Maintenance			
Congestion			
Intersections in need of improvements			
Heavy truck traffic			
Lack of road connectivity (need additional roads to provide route alternatives)			
Railroad crossings			
Limited number of, or poor condition of, sidewalks, hike/bike trails			

A joint project (Pearland Mobility Study and FM 518 Corridor Study introductory survey was used to gather feedback on transportation-related issues within Pearland.

Engagement Opportunities



The Pearland Mobility Study kicked off in January 2024. Since then, there have been a variety of public engagement efforts. This document summarizes results of the various events (listed below):

1. **Steering Committee Meeting (January 23rd)**
2. **Pearland Spring Fest (April 6th)**
3. **Online Engagement (April 1st – April 26th)**
4. **Stakeholder Meeting (March 18th)**



The photo to the left was taken at the 1st Stakeholder Meeting.



This flyer (also in Spanish) was used to spread the word about the projects and upcoming Spring Fest.

Pearland Spring Fest (April 6th, 2024)





- This annual family-friendly event in Independence Park
- The project team shared a booth with FM 518 Corridor's Project Team
- Engagement activities included:
  - Budget Prioritization Activity
  - QR link for the online survey
  - Spin the wheel to win a prize

Snapshots from the Event!













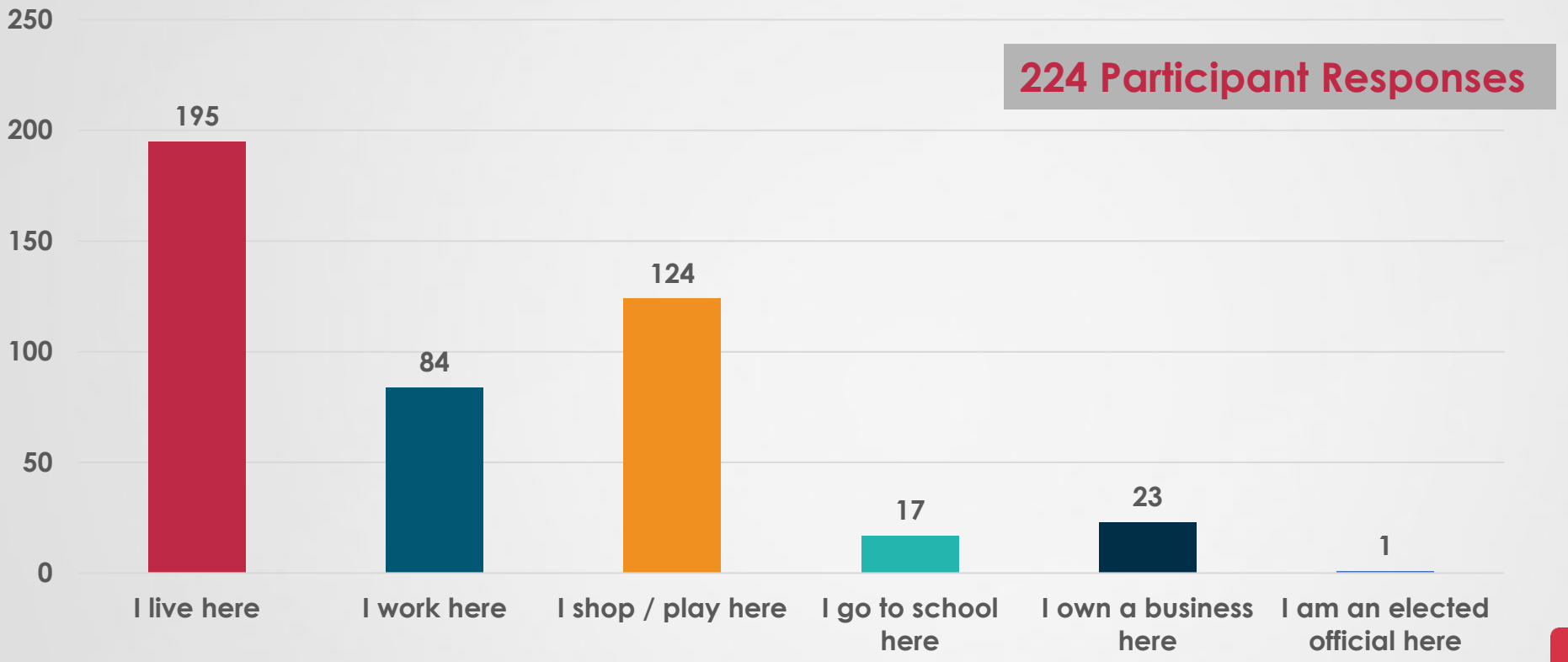
Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



What do you do in Pearland?

***Respondents could select multiple options for this question



224 Participant Responses

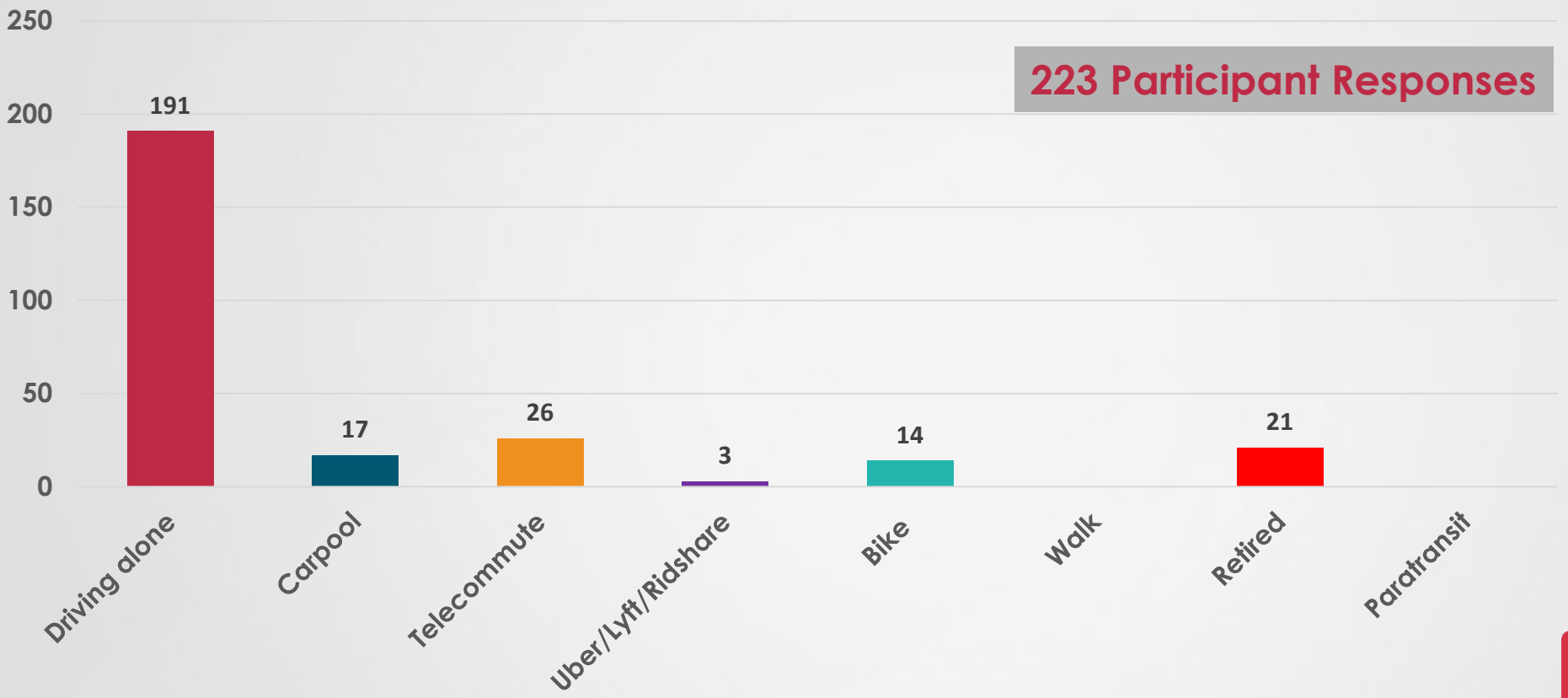
Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



What is your primary mode of travel to work or school?

***Respondents could select multiple options for this question



223 Participant Responses

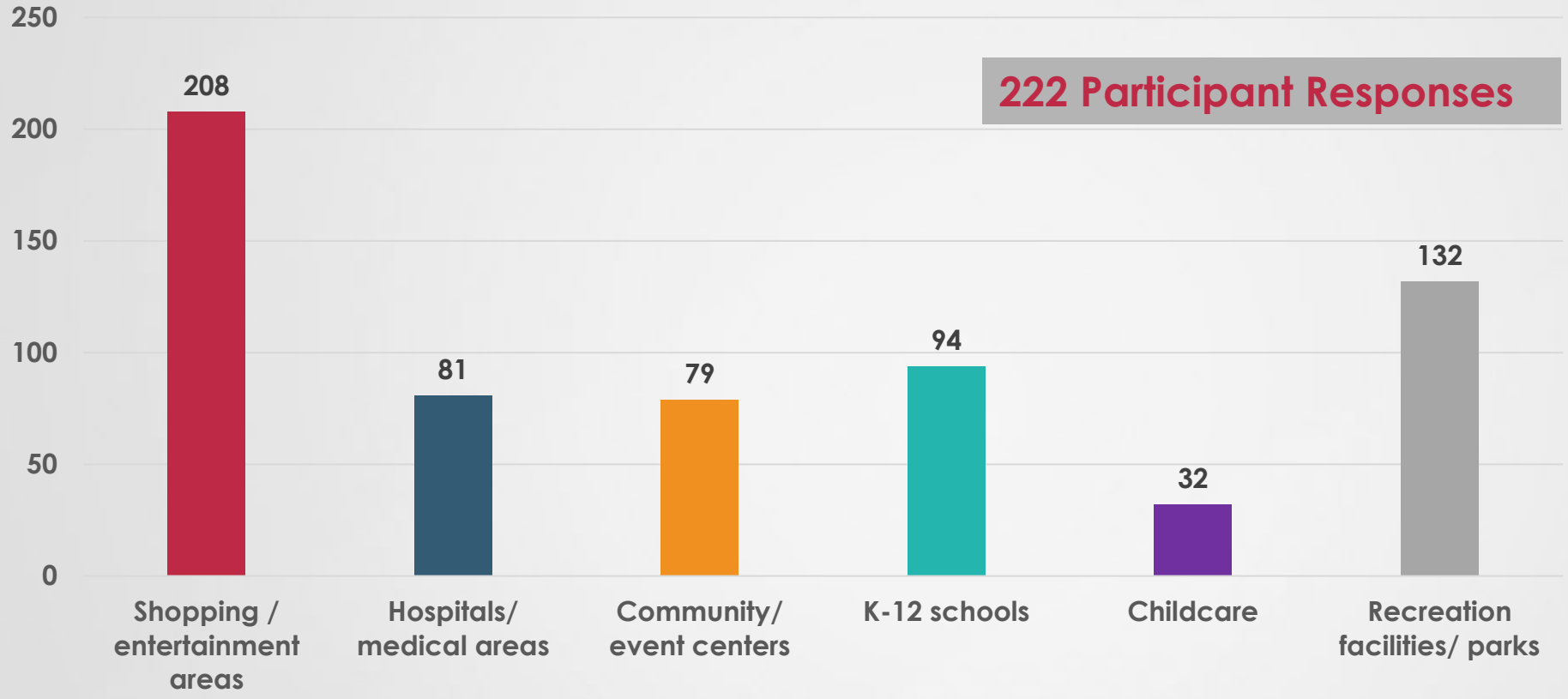
Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



Which type of community services and facilities within the City of Pearland do you use most often?

***Respondents could select multiple options for this question

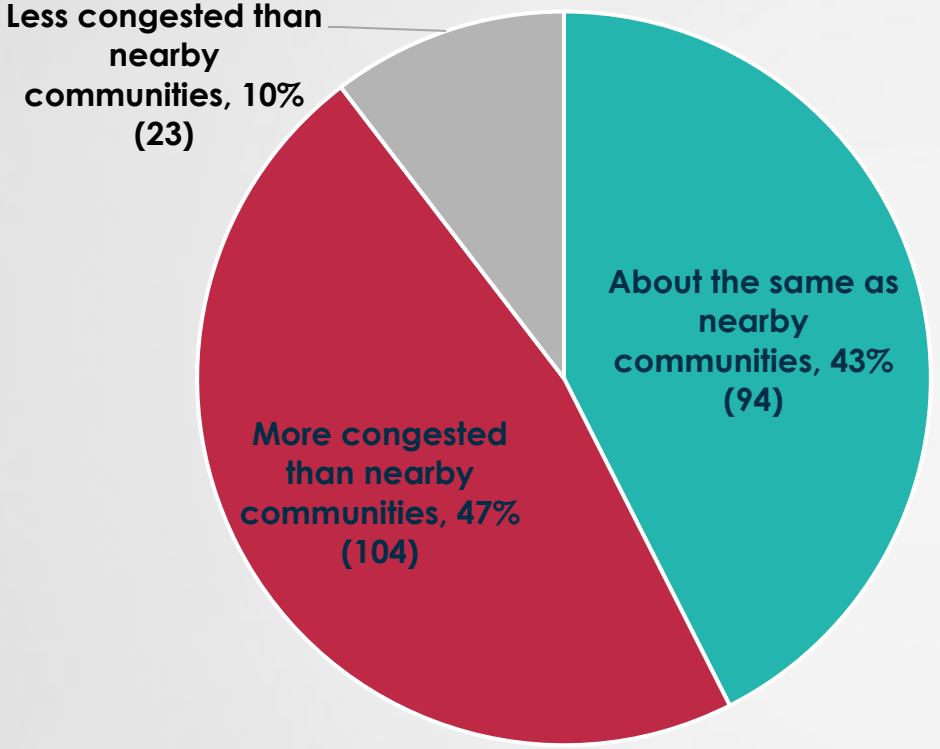


Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



How would you describe the existing AUTOMOBILE TRAFFIC within the City of Pearland?



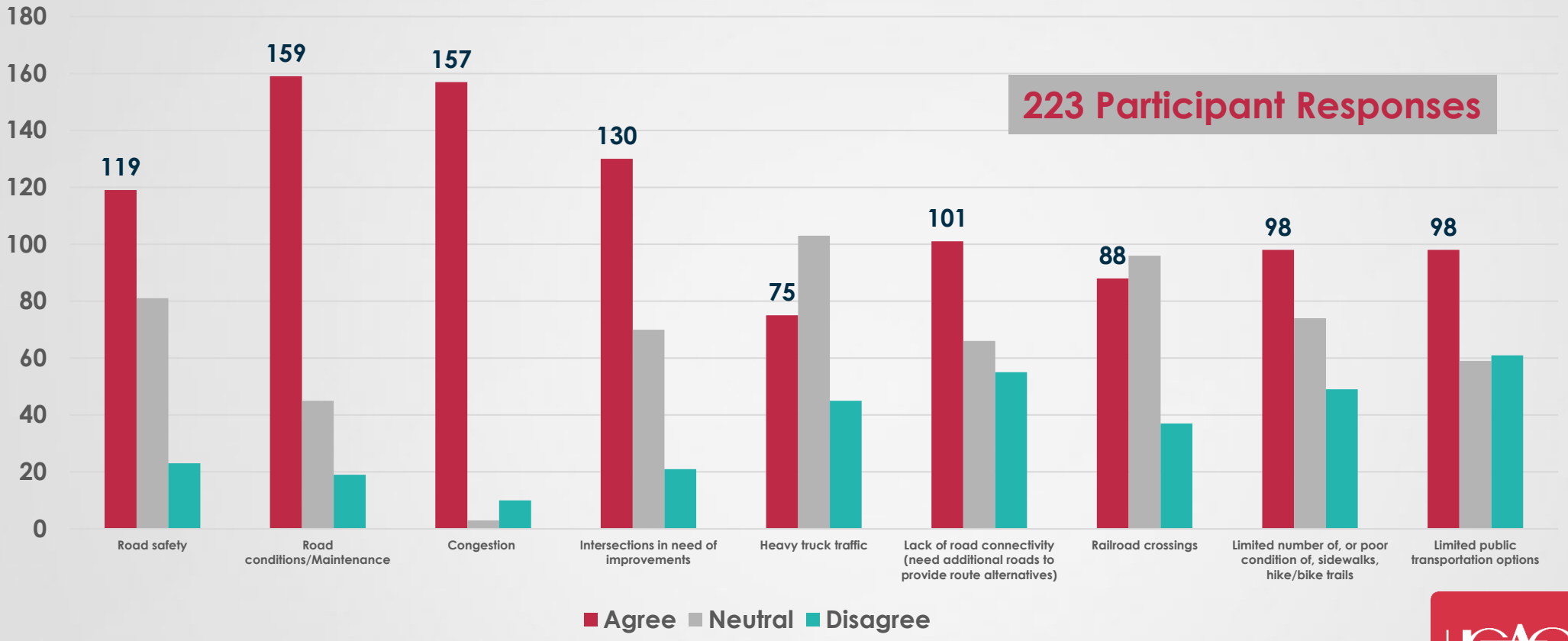
221 Participant Responses

Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



Please let us know if the following transportation issues are of concern in the City of Pearland?

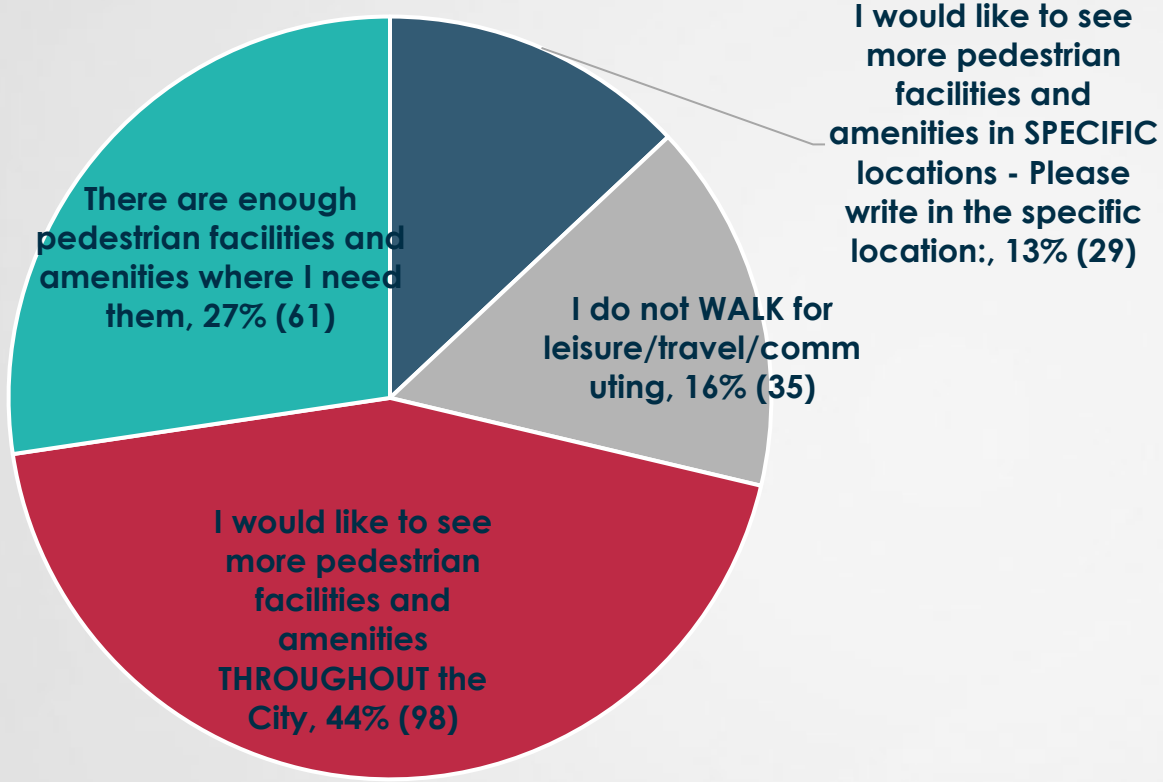


Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



How would you describe the existing PEDESTRIAN facilities and amenities (sidewalks / trails, curb ramps, lighting, benches, shade trees, crosswalks, pedestrian islands, audio assisted crossings, push buttons,etc)?



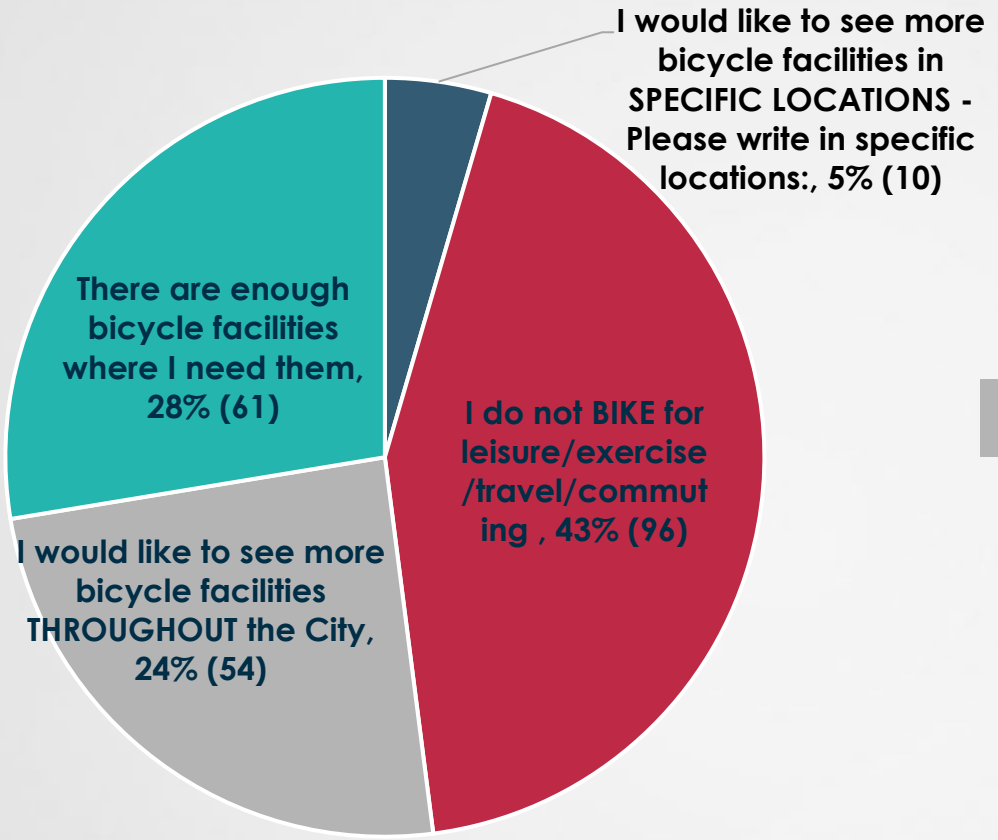
223 Participant Responses

Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



How would you describe the existing BICYCLE facilities (bike lanes, shared-use paths, safety measures, bike parking, etc.)?



221 Participant Responses

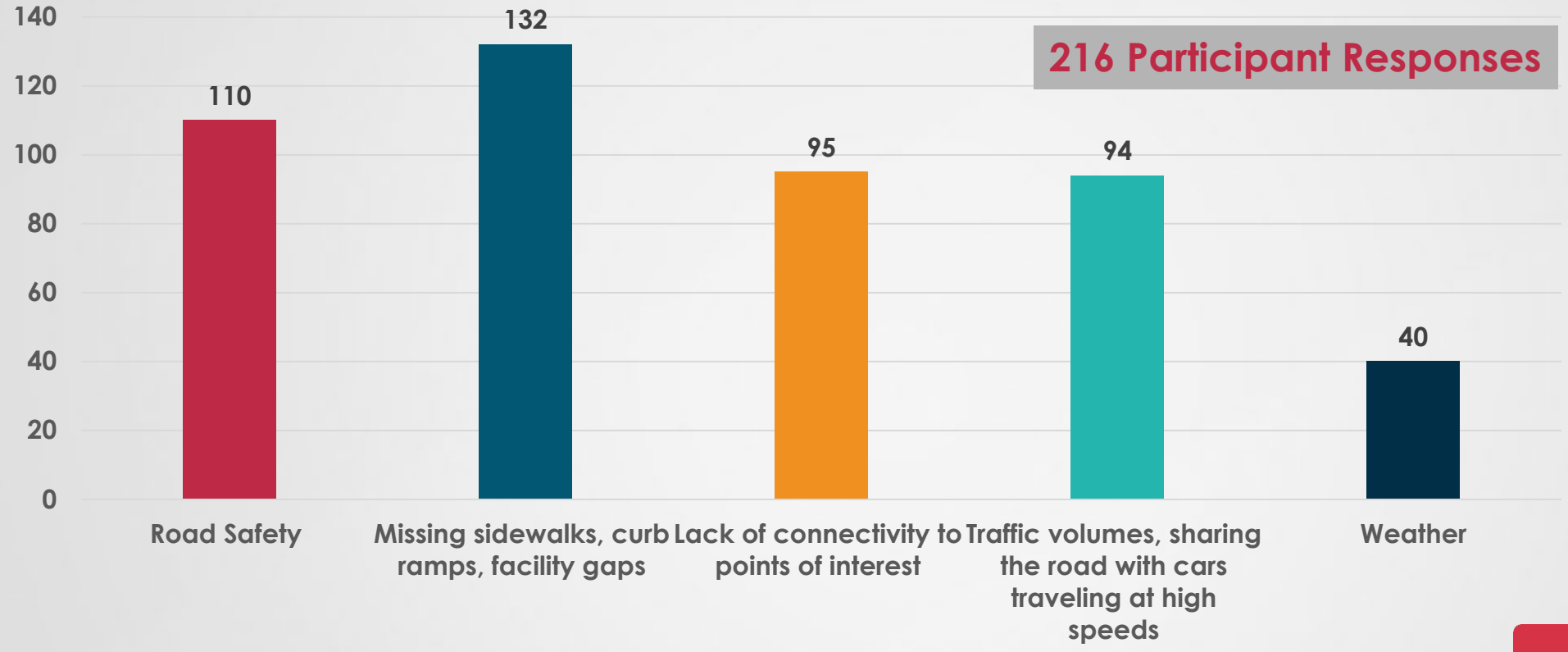
Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



What is the main barrier to walking or biking in Pearland?

***Respondents could select multiple options for this question

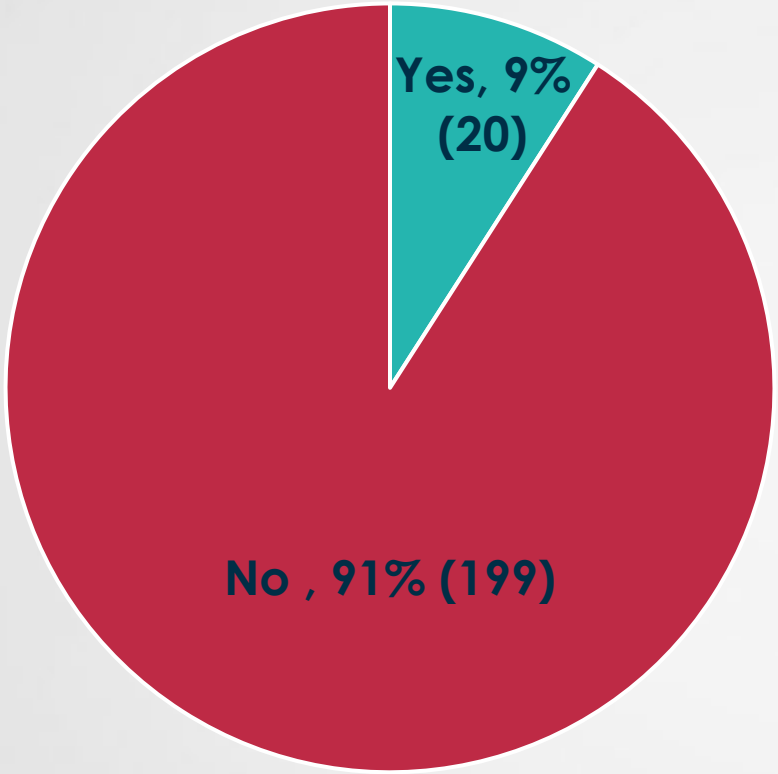


Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



Do you (or your family members) use mobility aids (wheelchairs, walking frames, electric scooters, etc.) to travel around the local area?



219 Participant Responses

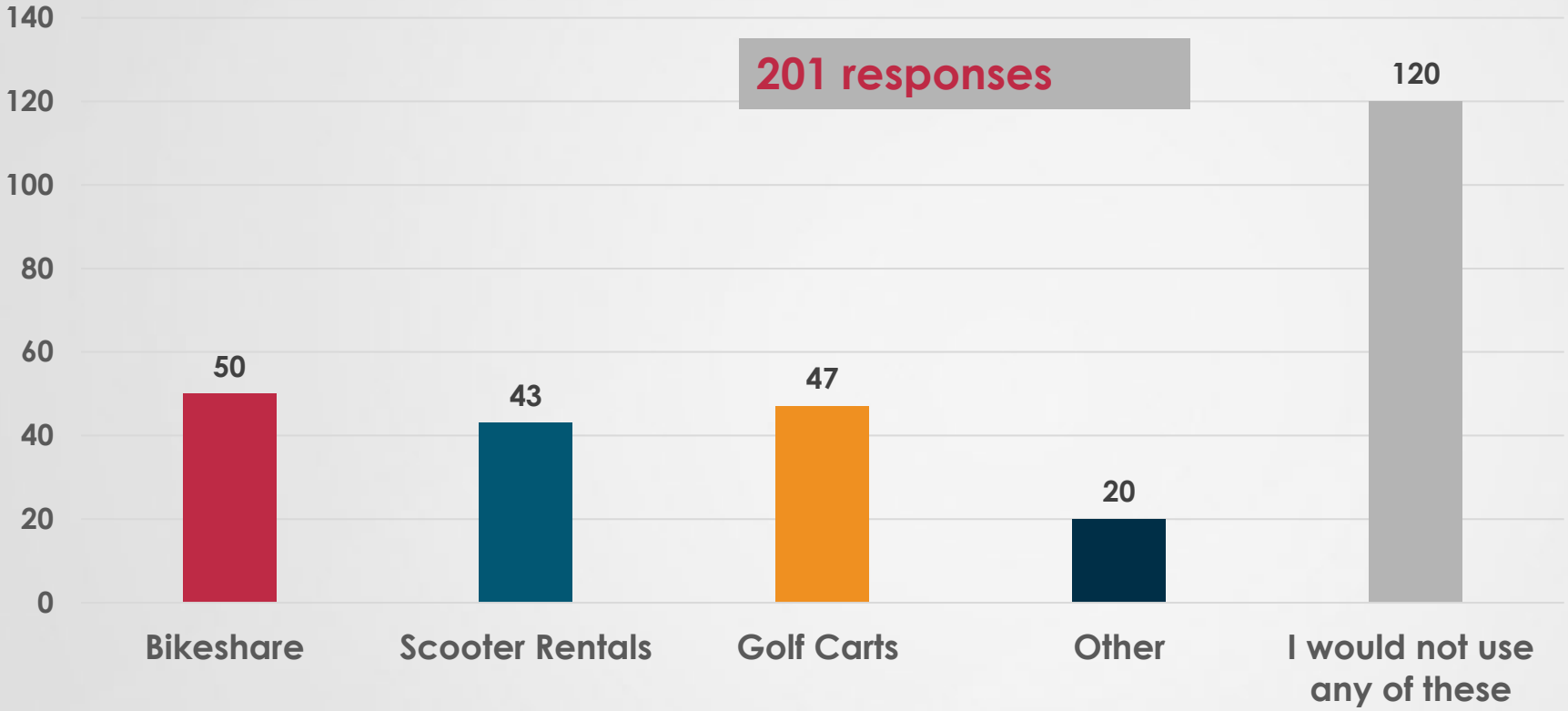
Survey Results

Includes: Spring Fest, Online Feedback, Stakeholder Meeting



If the following MICROMOBILITY options were made available in the City of Pearland, which ones would you use?

***Respondents could select multiple options for this question



Budget Prioritization Activity



Budget Prioritization Activity

TRAFFIC SAFETY



Includes measures like street lights, stop signs, audio-assisted crossings, pavement striping, intersection safety treatments.

PEDESTRIAN FACILITIES



Includes measures like putting in new sidewalks / trails, ADA compliant curb ramps, lighting along pedestrian paths, benches.

BICYCLE FACILITIES



Includes measures like putting in new bike lanes, shared use paths, improve connectivity between existing lanes and paths, bike parking.

ROADWAY IMPROVEMENTS



Includes measures like widening roadways, turn lanes, on-street parking, medians, repairing potholes.

MICROMOBILITY



Includes measures like bikeshare facilities, scooter rentals, golf carts.

TRANSPORTATION TECHNOLOGY



Includes measures like traffic signal timing / coordination, traveler information, traffic monitoring, travel time monitoring.

SHOW US WHAT MATTERS TO YOU BY BUDGETING FOR EACH CATEGORY.
EACH BALL REPRESENTS $1,000. YOU HAVE $10,000 (10 BALLS).
PLACE YOUR 10 BALLS INTO THE JARS REPRESENTING
YOUR PRIORITIES FOR FUTURE FUNDING.

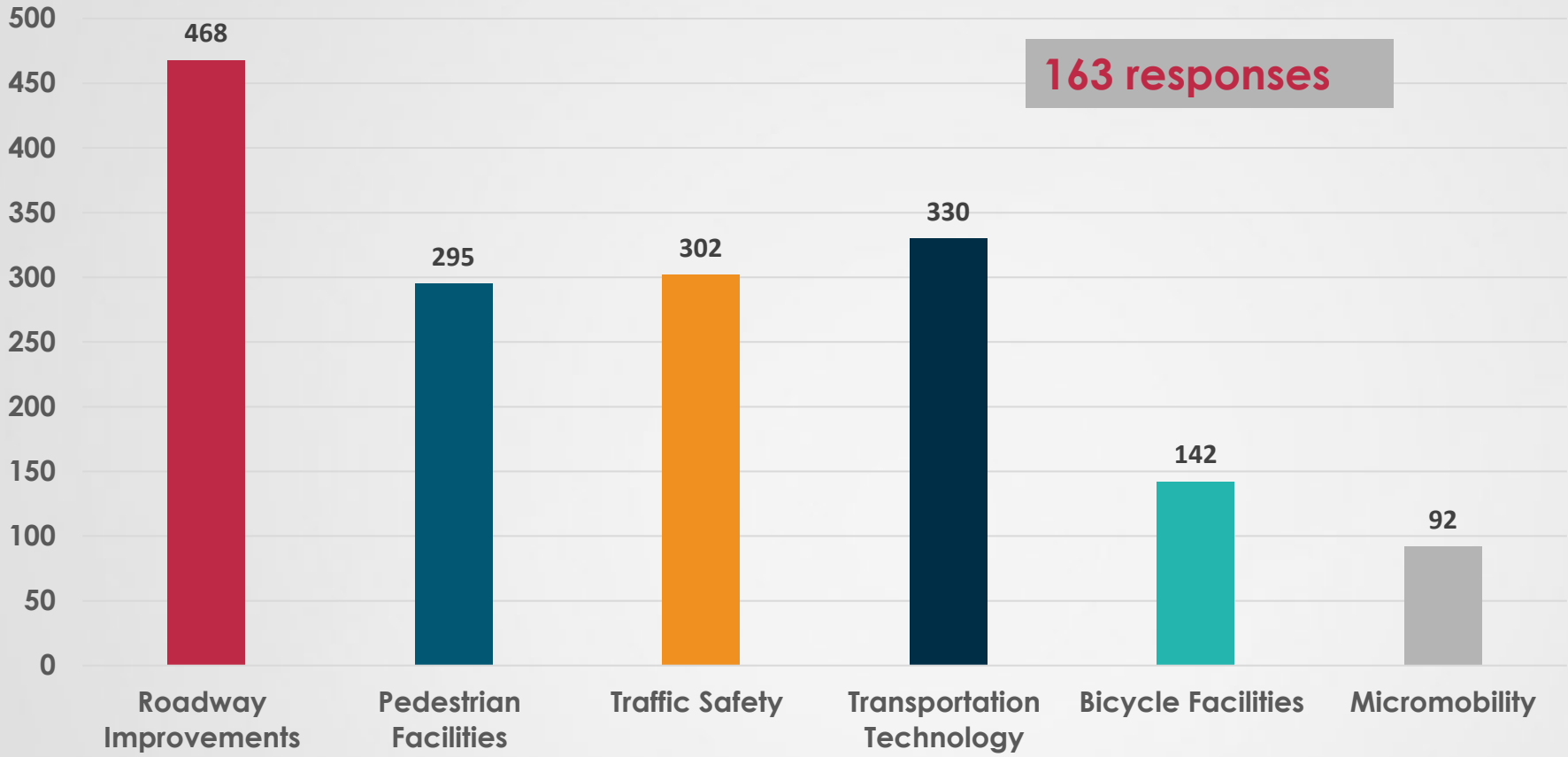
BUDGET FOR THE FUTURE

SHOW US WHAT MATTERS TO YOU BY BUDGETING FOR EACH CATEGORY.
EACH BALL REPRESENTS $1,000. YOU HAVE $10,000 (10 BALLS).
PLACE YOUR 10 BALLS INTO THE JARS REPRESENTING
YOUR PRIORITIES FOR FUTURE FUNDING.

Budget Prioritization Activity Results



Includes: Spring Fest, Online Feedback, Stakeholder Meeting



Most of the participation results, 138 were from the Spring Fest pop-up engagement. Online participation had received 9 submissions, and the Stakeholder Group had 16 submissions.




Thank You!




Regional Collaboration • Transportation Planning • Multimodal Mobility

H-GAC
Houston-Galveston Area Council

We want your feedback for the FM 518 (McLean Rd. to E. Edgewood Dr.) Corridor Study AND the Pearland Mobility Study! Please fill out our combined projects survey!

SURVEY RESPONSE REPORT

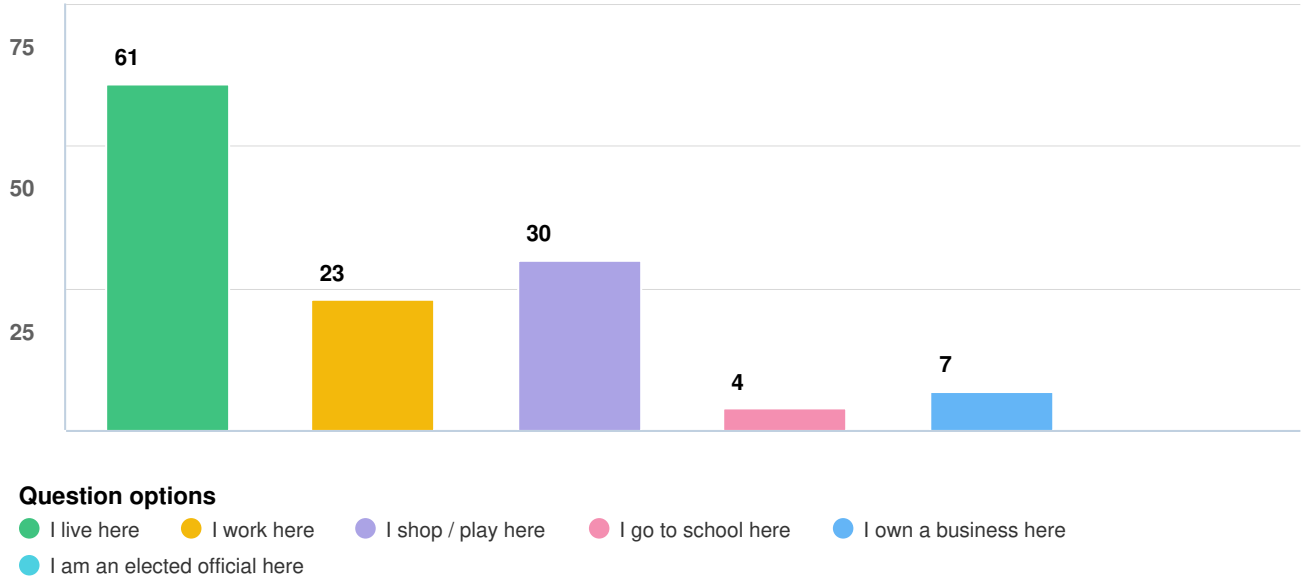
24 March 2024 - 22 April 2024

PROJECT NAME:
Pearland Mobility Study

BANG THE TABLE engagementHQ

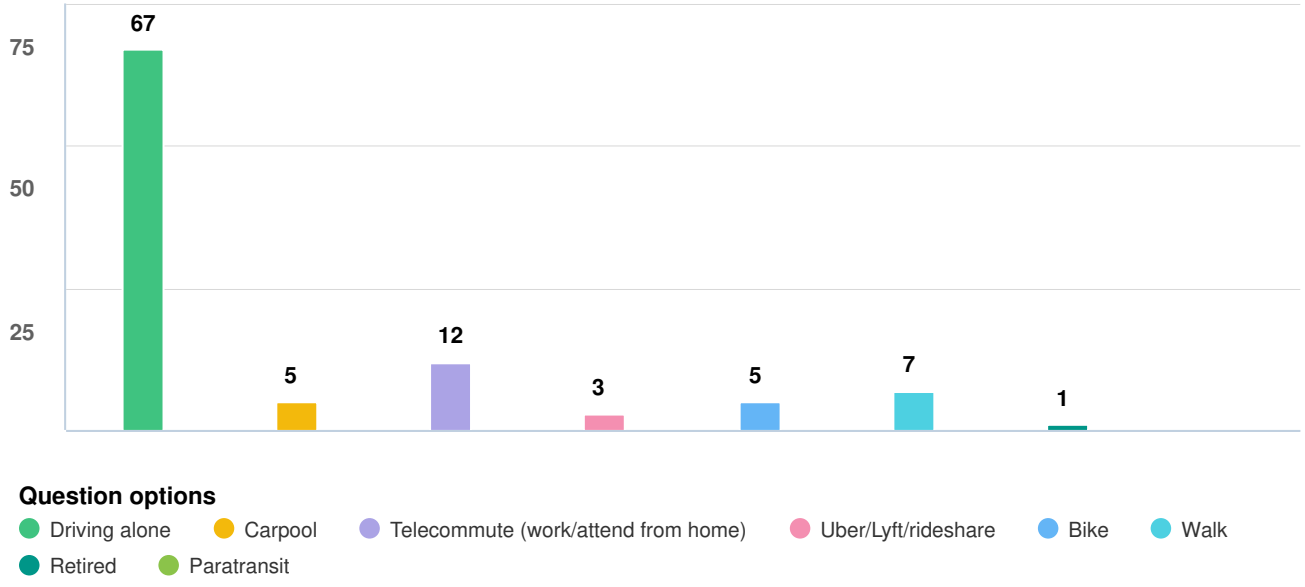
SURVEY QUESTIONS

Q1 What do you do in the City of Pearland? (select all that apply)



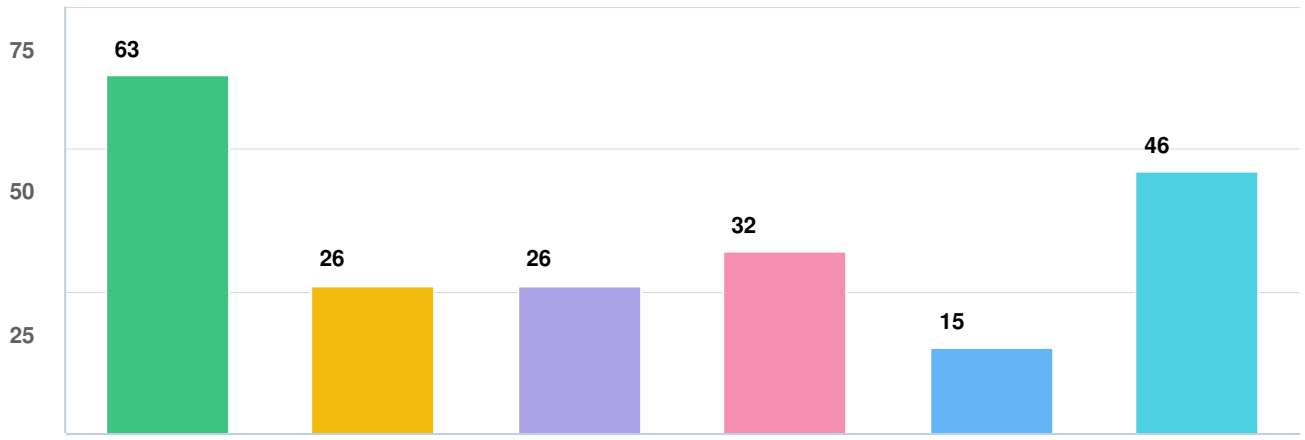
Optional question (72 response(s), 0 skipped)
Question type: Checkbox Question

Q2 What is your primary mode of travel to work or school? (select all that apply)



Optional question (72 response(s), 0 skipped)
Question type: Checkbox Question

Q3 Which type of community services and facilities within the City of Pearland do you use most often? (select all that apply)

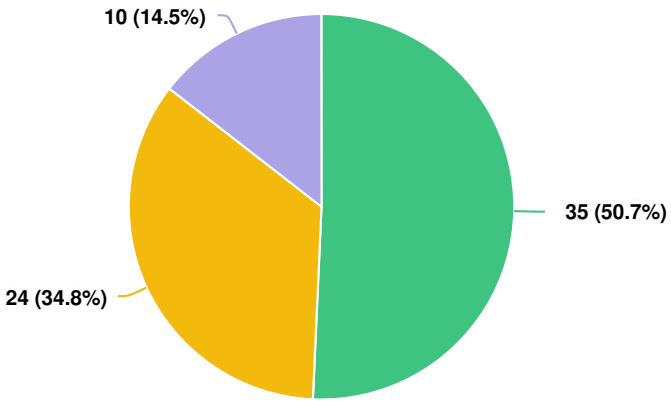


Question options

Shopping / entertainment areas
Hospitals / medical centers
Community / event centers
K-12 schools
Childcare
Recreation facilities / parks

Optional question (71 response(s), 1 skipped)
Question type: Checkbox Question

Q4 How would you describe the existing AUTOMOBILE TRAFFIC within the City of Pearland?

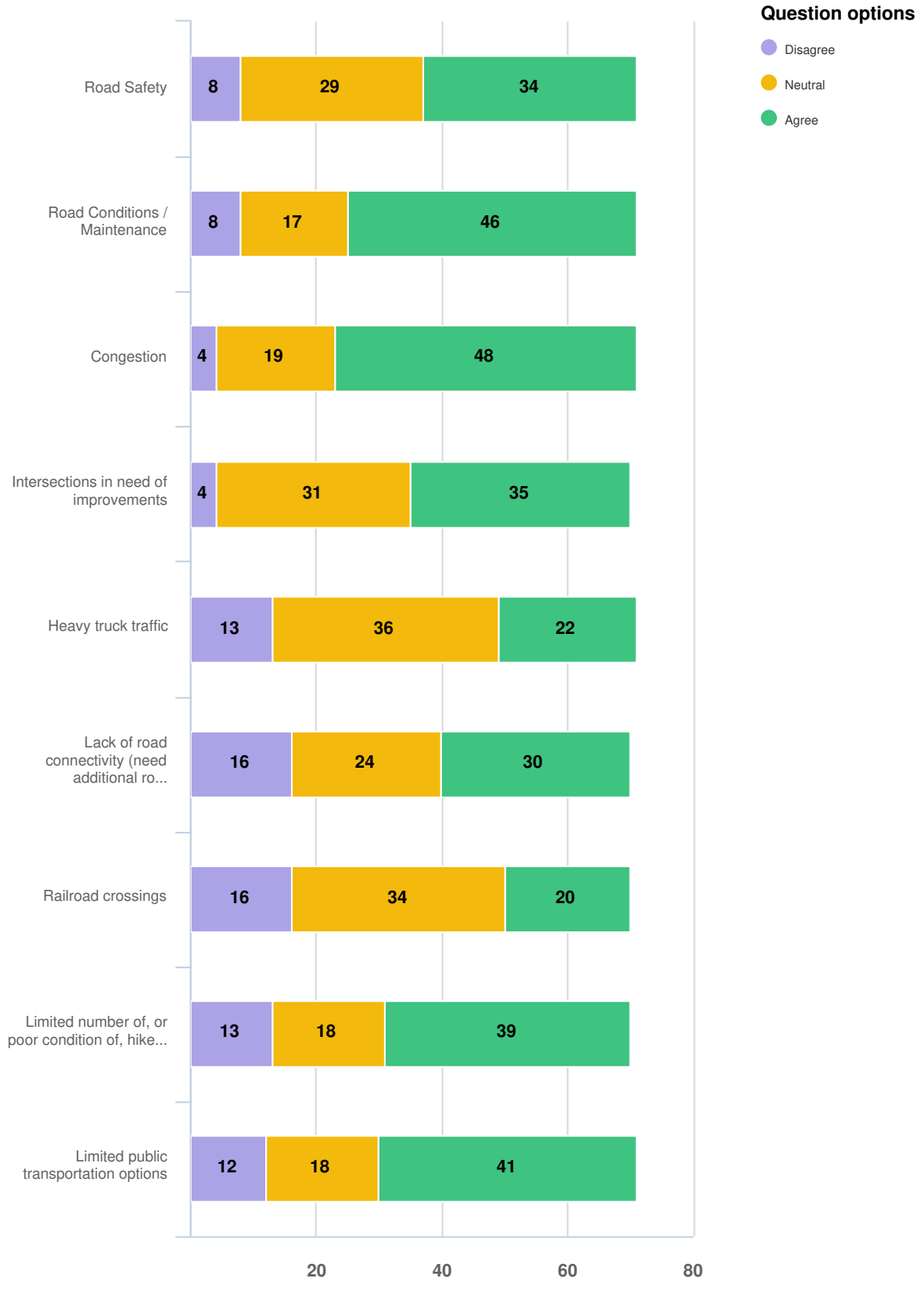


Question options

About the same as nearby communities
More congested than nearby communities
Less congested than nearby communities

Optional question (69 response(s), 3 skipped)
Question type: Dropdown Question

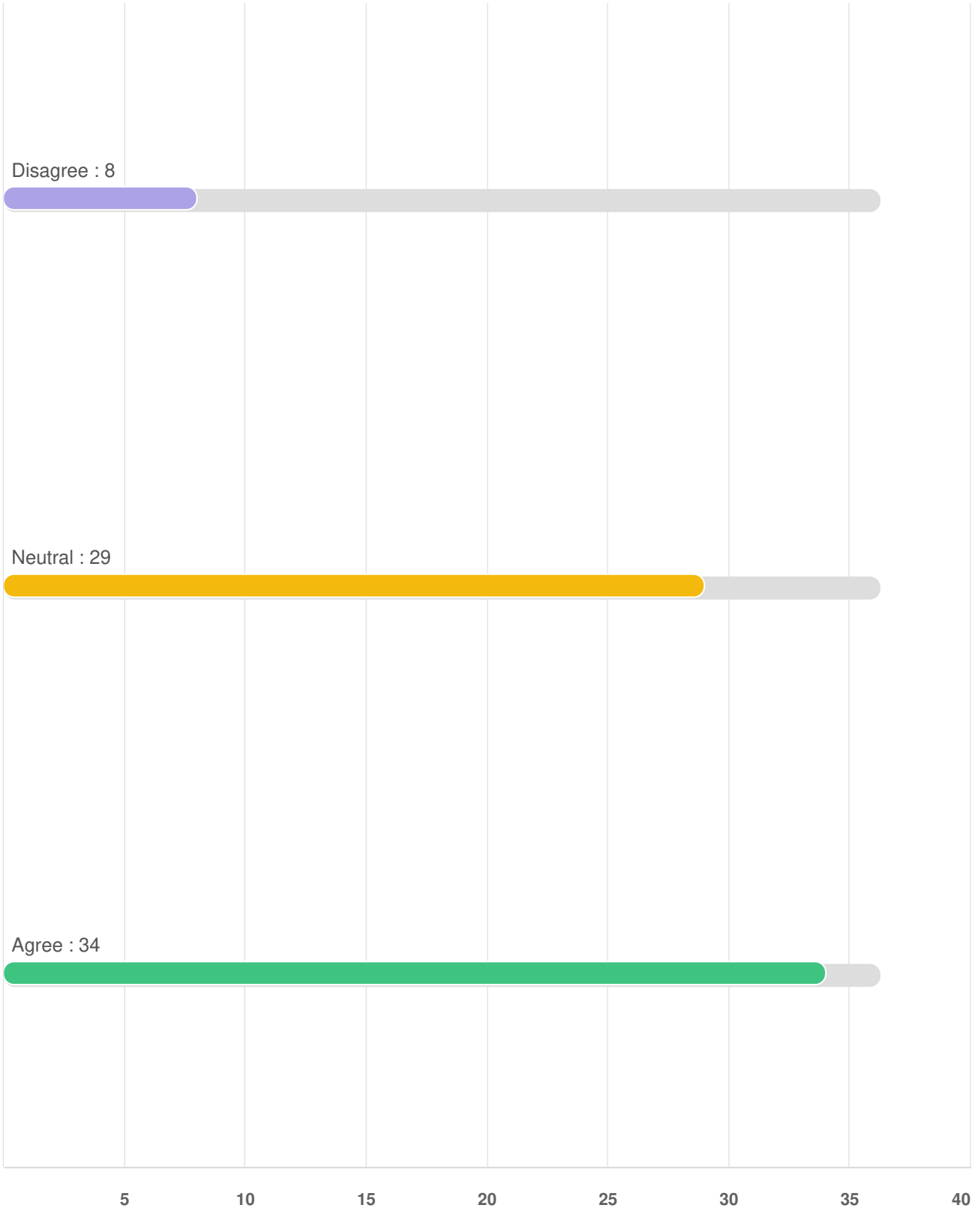
Q5 Please let us know if the following transportation issues are of concern in the City of Pearland.



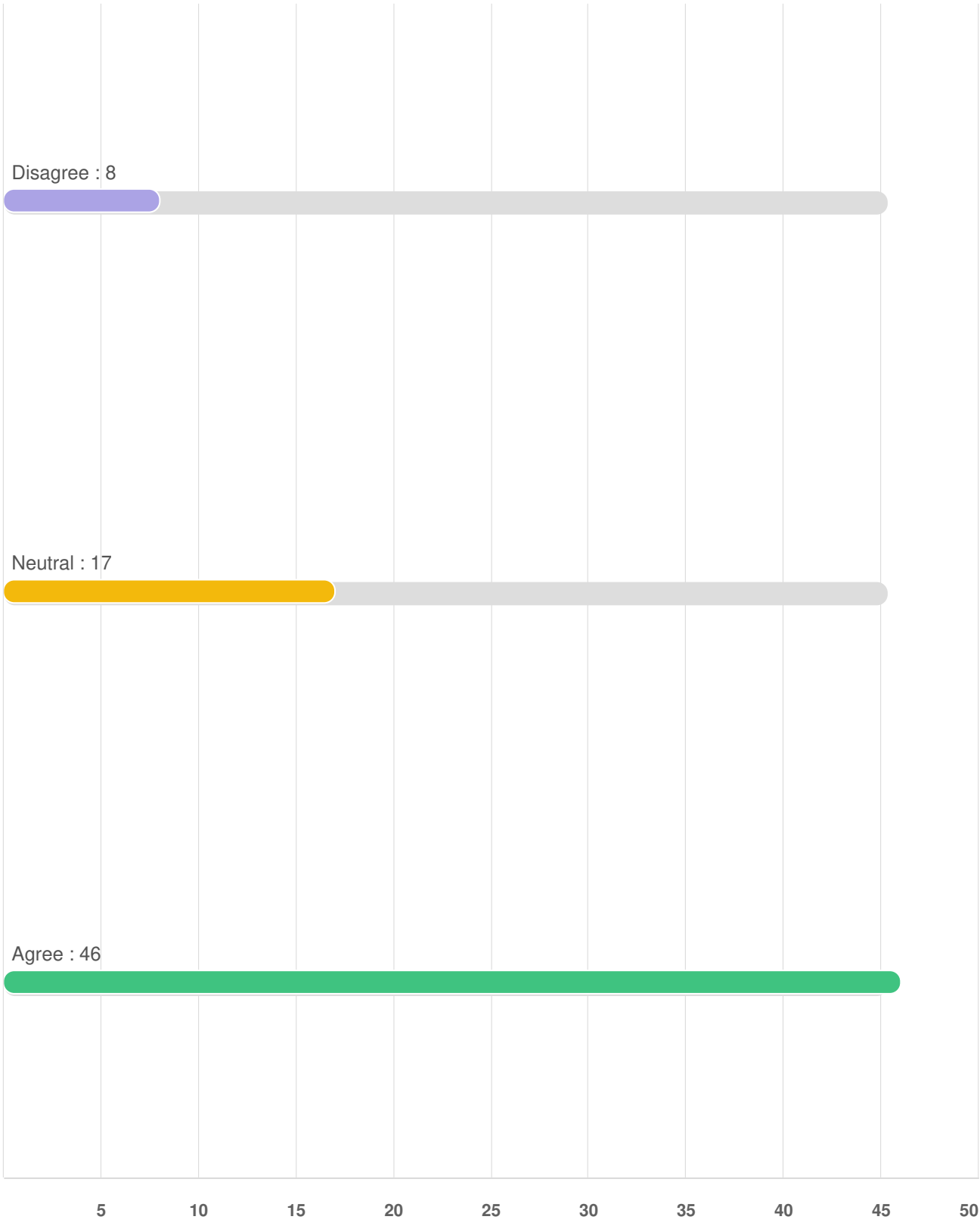
Optional question (71 response(s), 1 skipped)
Question type: Likert Question

Q5 **Please let us know if the following transportation issues are of concern in the City of Pearland.**

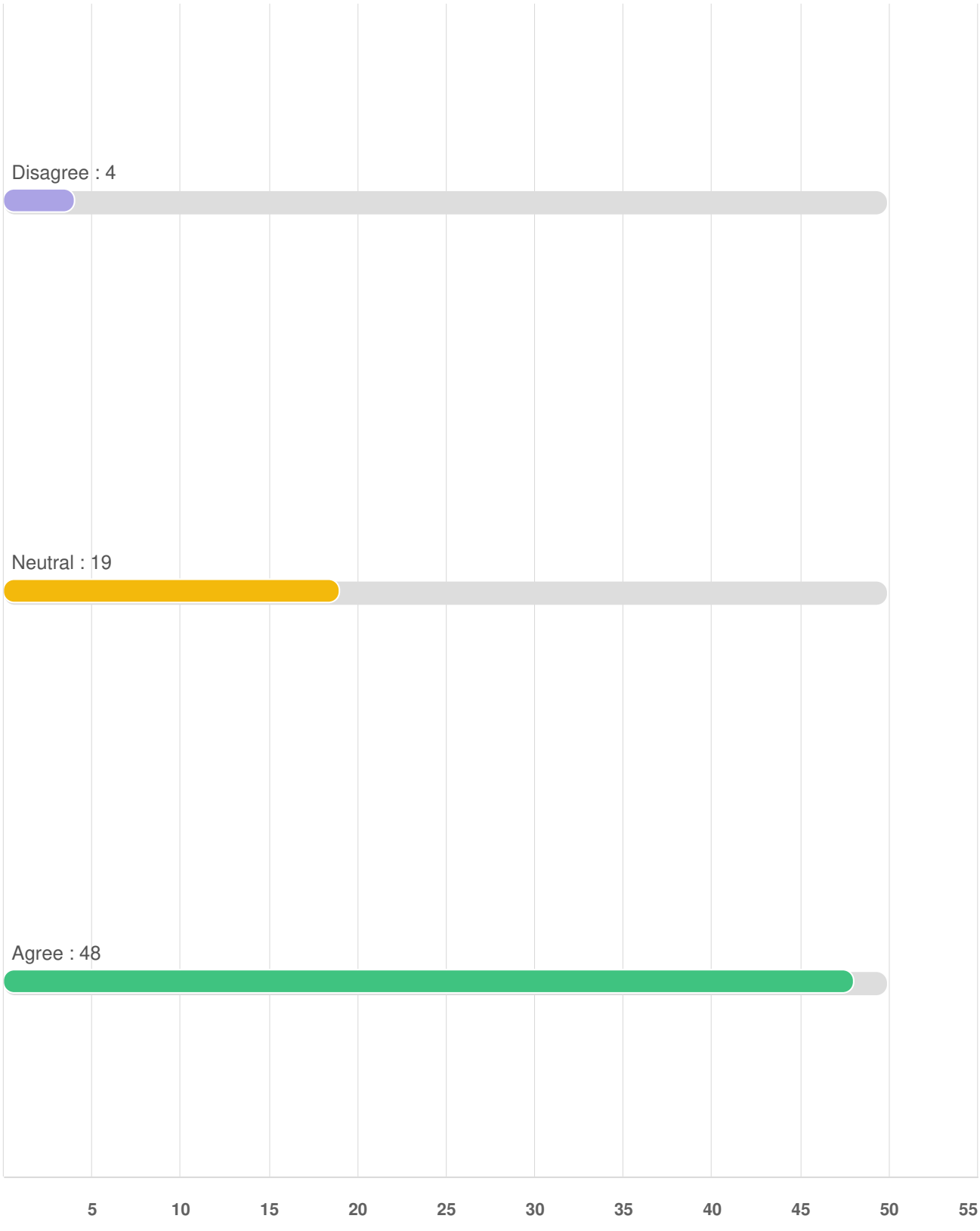
Road Safety



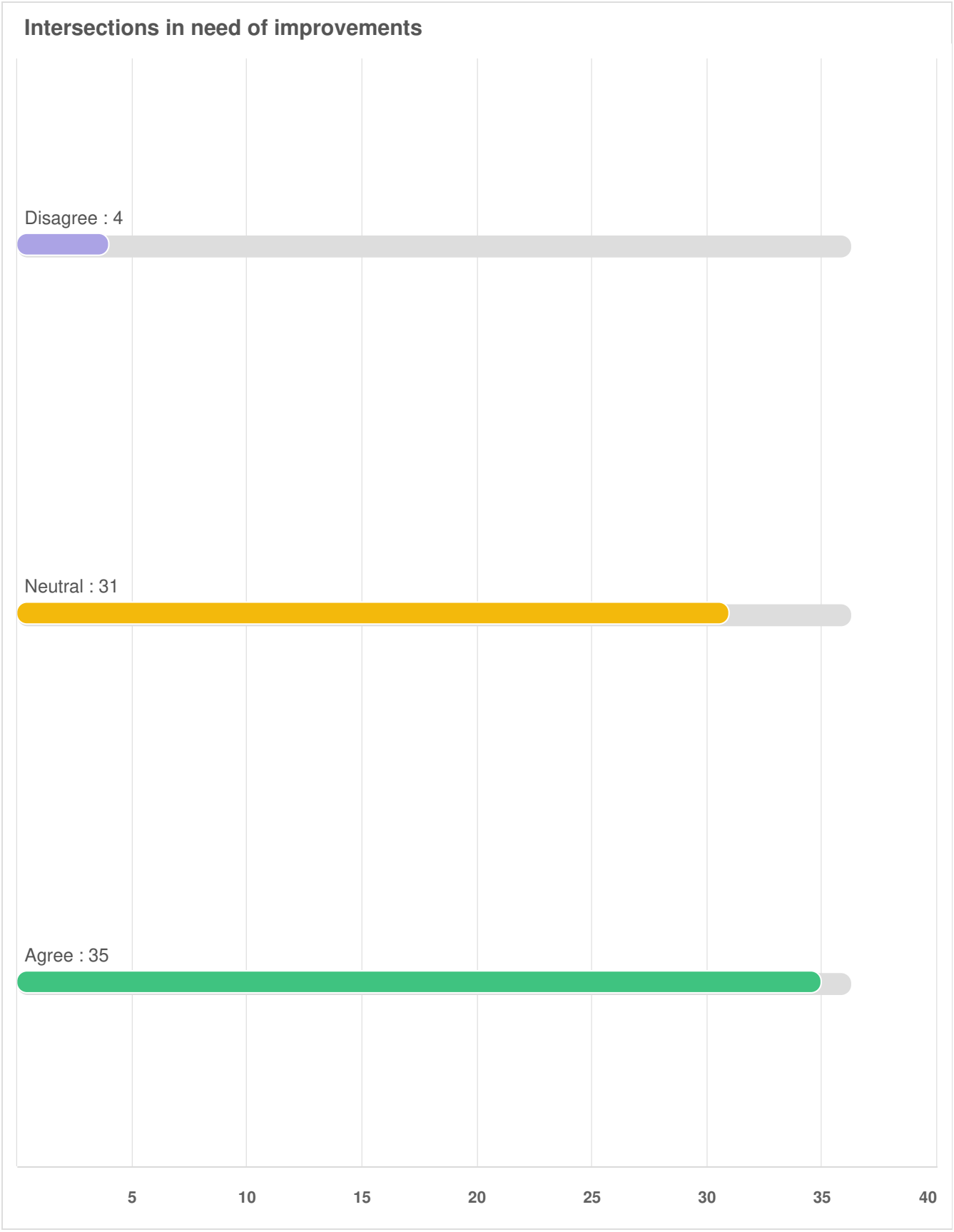
Road Conditions / Maintenance



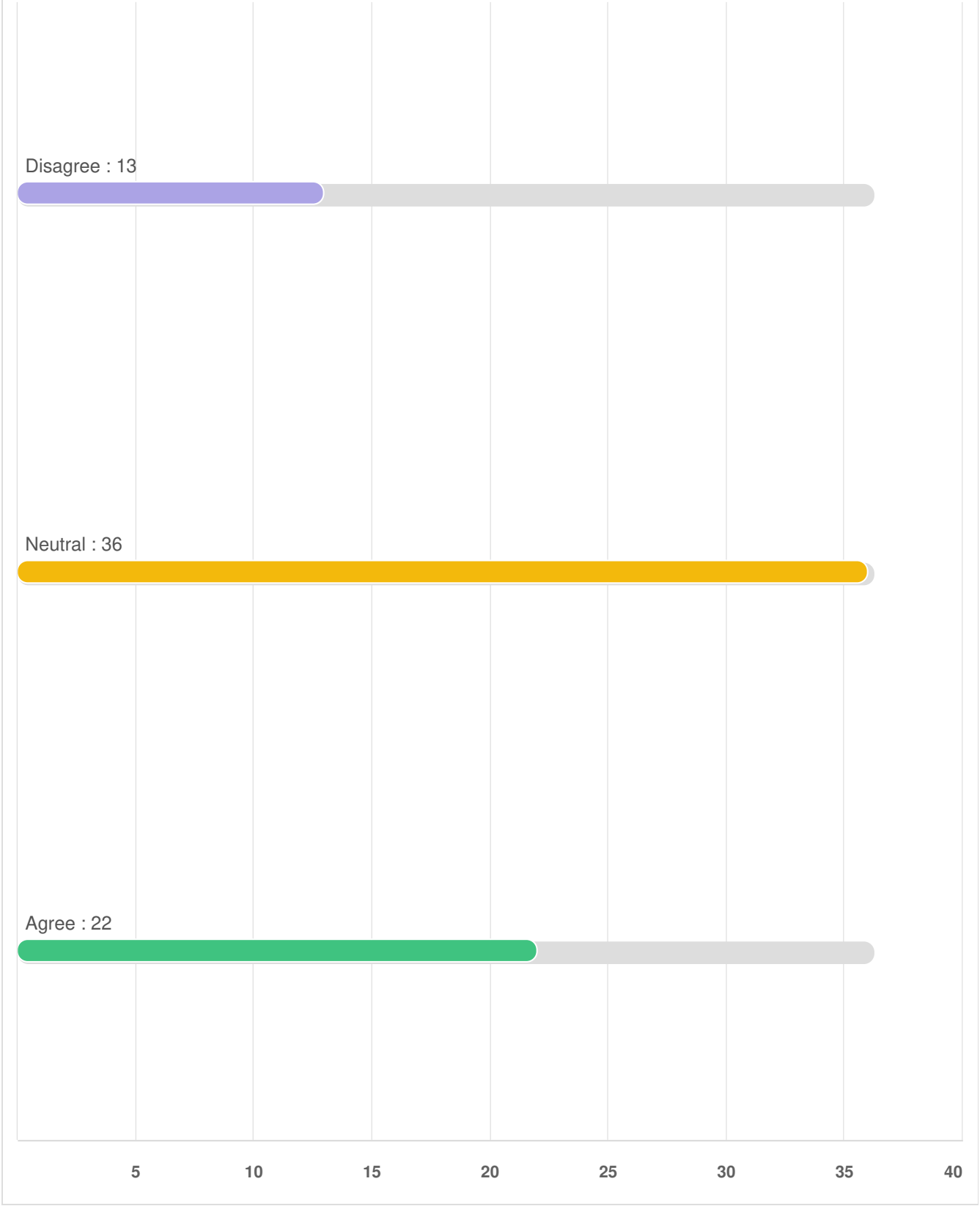
Congestion



Intersections in need of improvements



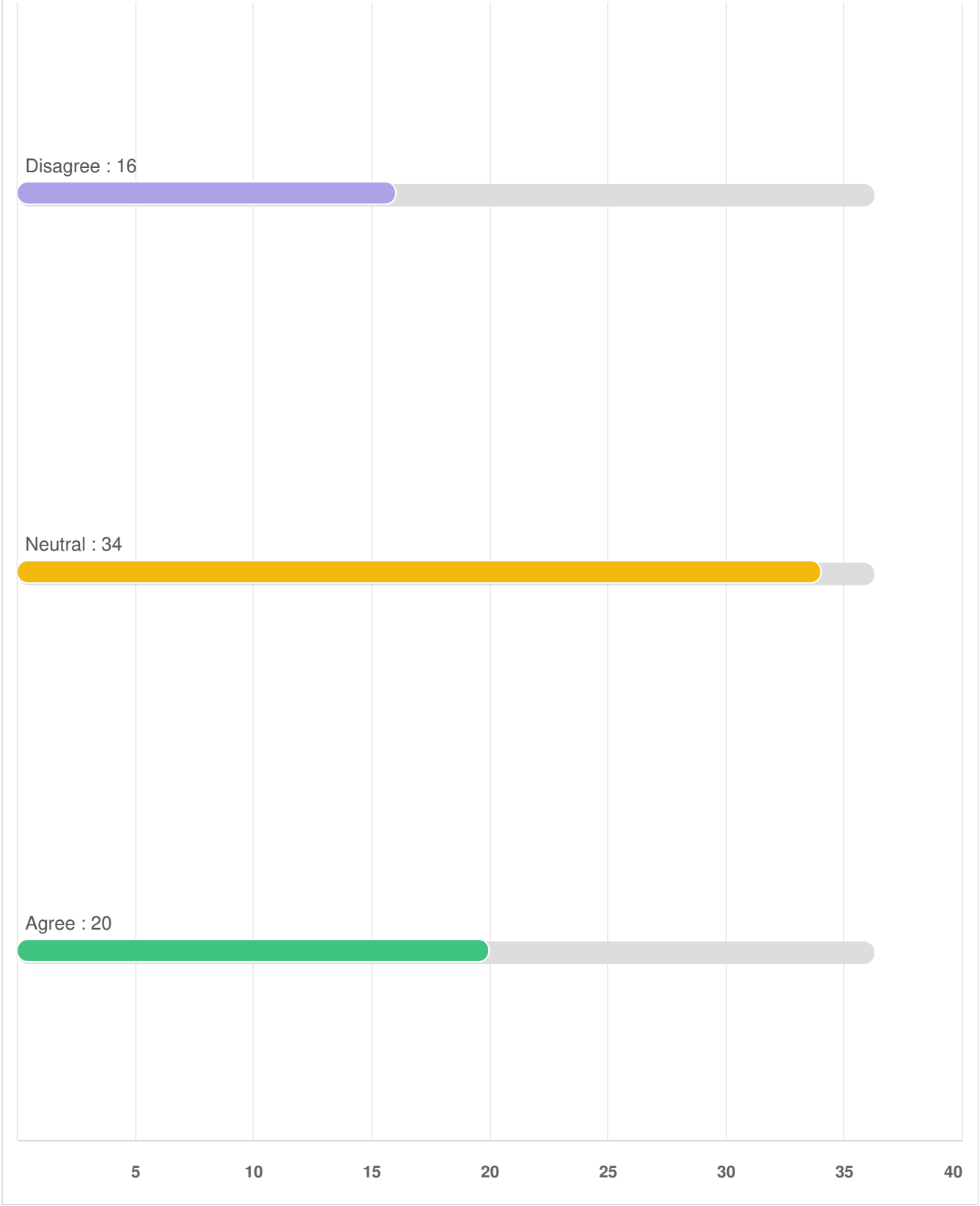
Heavy truck traffic

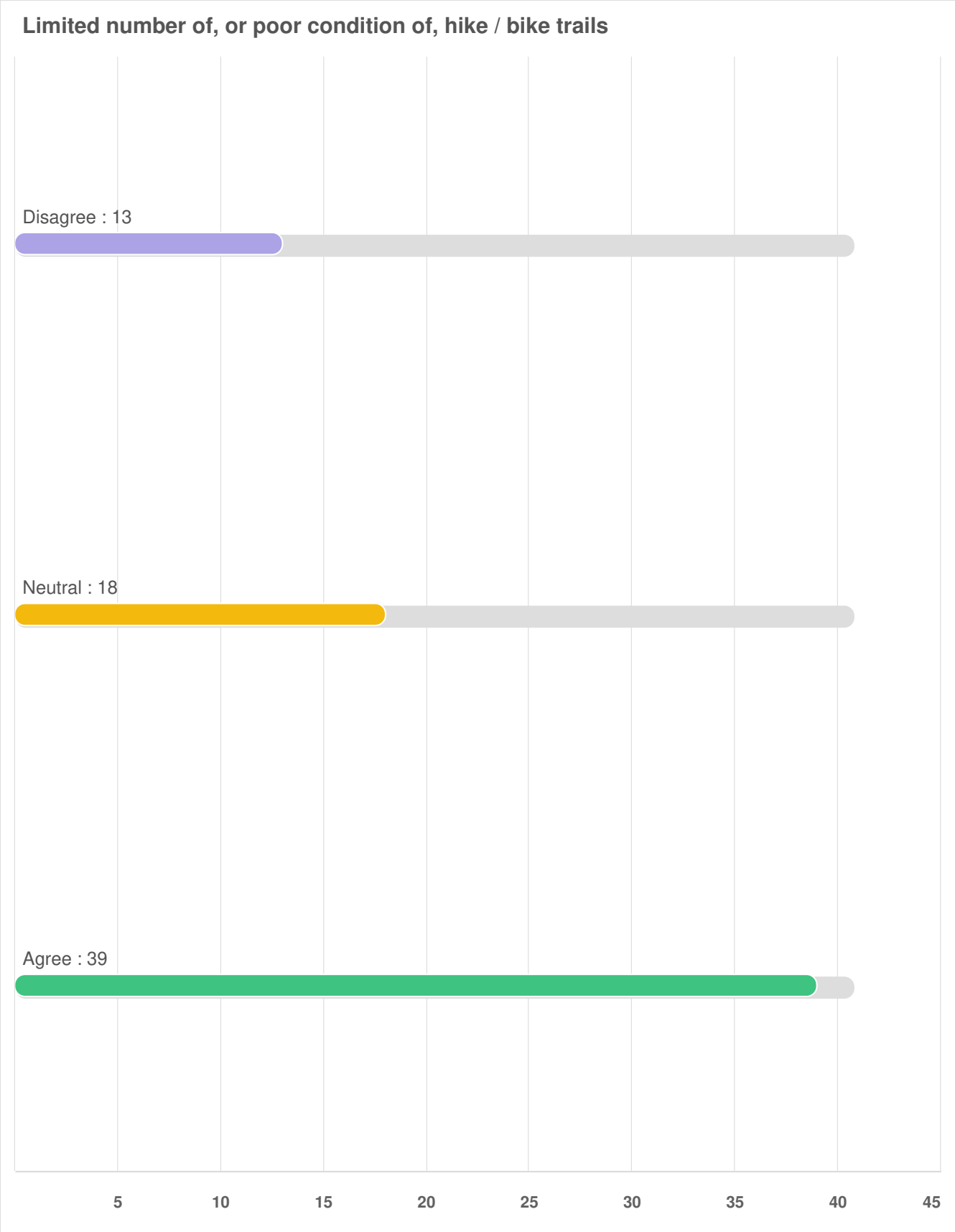


Lack of road connectivity (need additional roads to provide route alternatives)

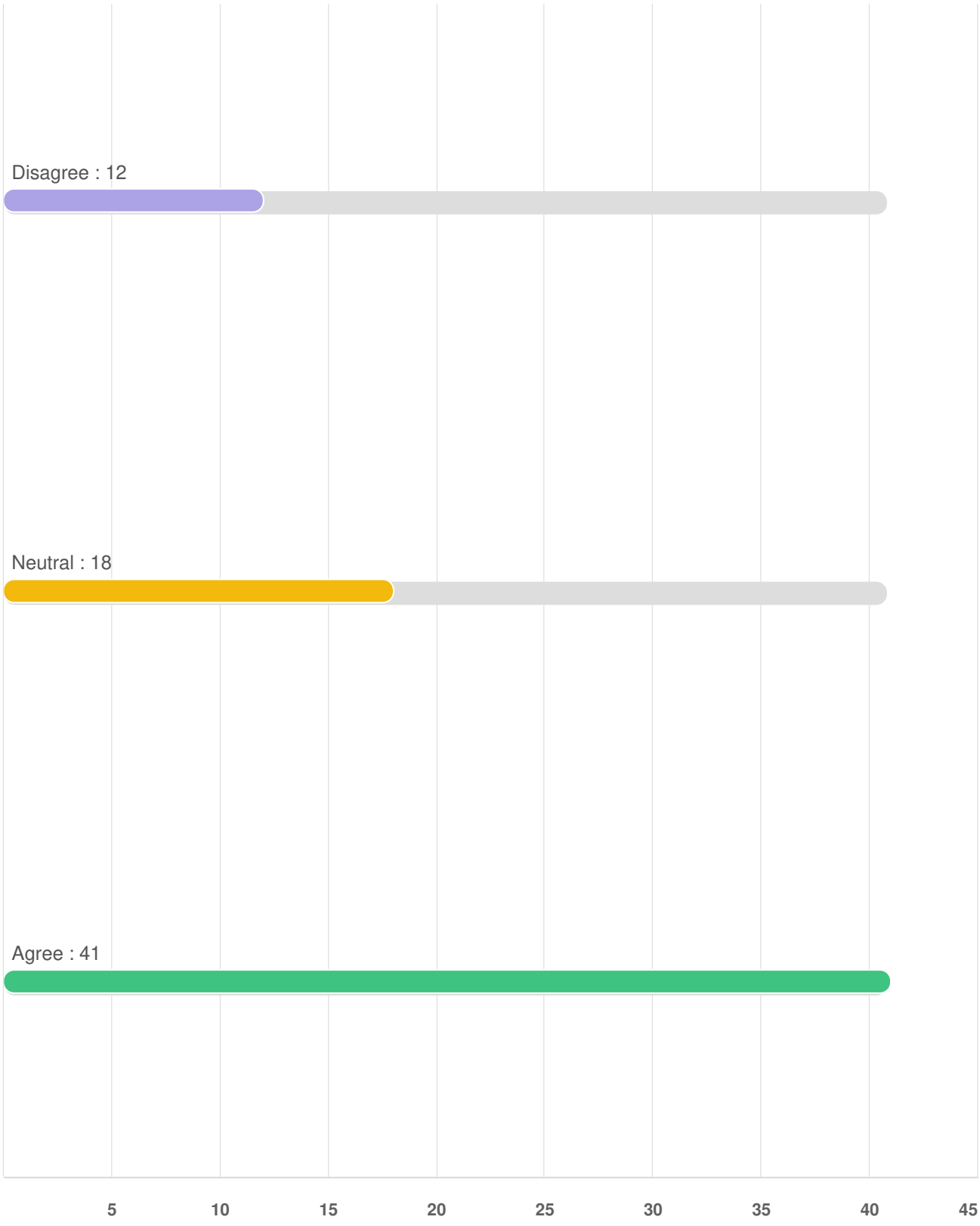


Railroad crossings

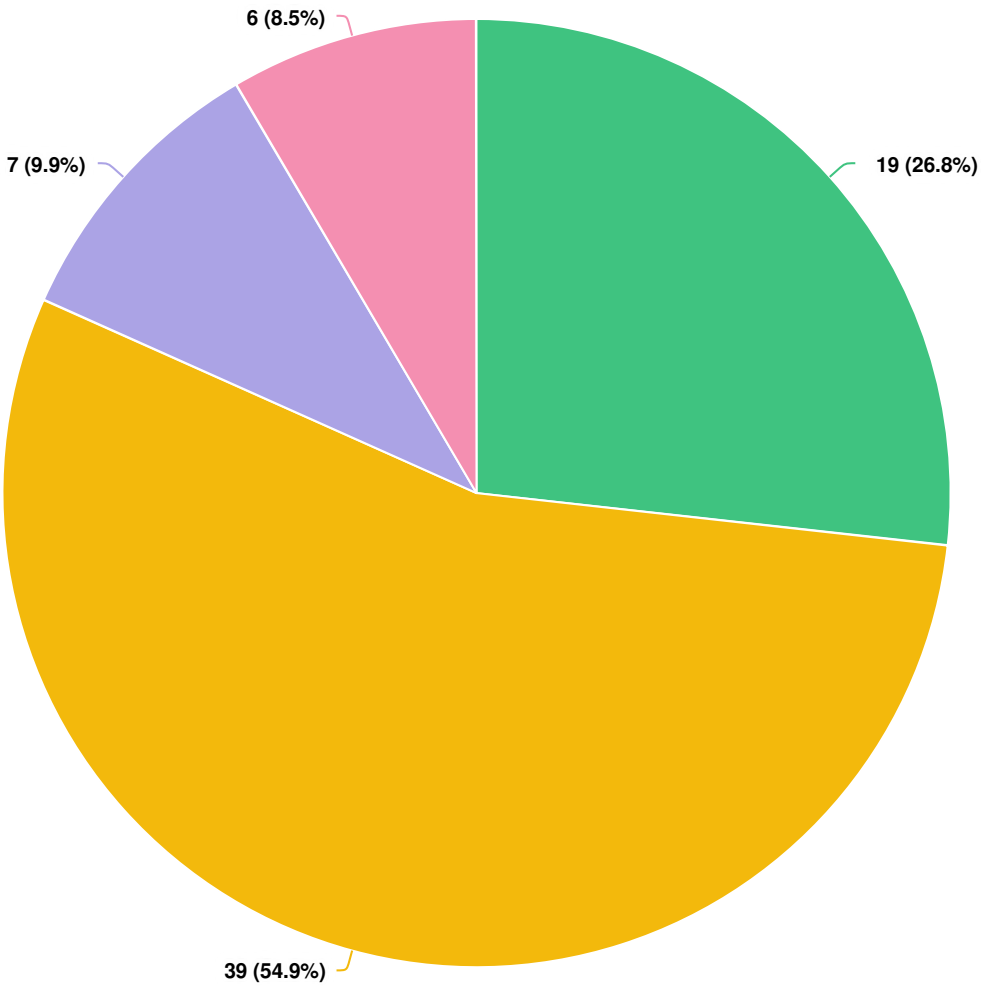



Limited number of, or poor condition of, hike / bike trails
Disagree : 13
Neutral : 18
Agree : 39
5
10
15
20
25
30
35
40
45

Limited public transportation options



Q6 How would you describe the existing PEDESTRIAN facilities and amenities (sidewalks / trails, curb ramps, lighting, benches, shade trees, crosswalks, pedestrian islands, audio-assisted crossings, push buttons,etc)?

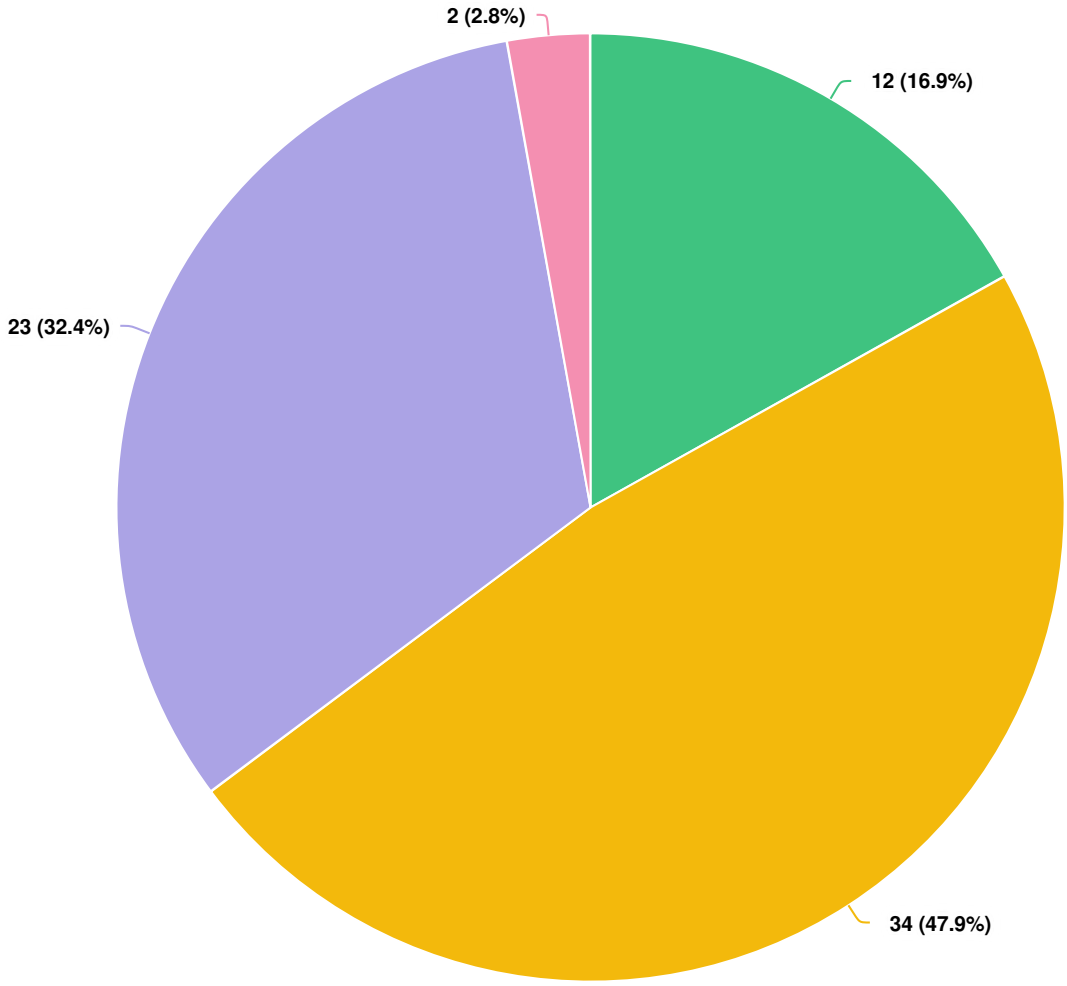


Question options

- I would like to see more pedestrian facilities and amenities in SPECIFIC locations Please write in specific location:
- I do not WALK for leisure/exercise/travel/commuting
- I would like to see more pedestrian facilities and amenities THROUGHOUT the City
- There are enough pedestrian facilities and amenities where I need them

Optional question (71 response(s), 1 skipped)
Question type: Radio Button Question

Q7 How would you describe the existing BICYCLE facilities (bike lanes, share-use paths, safety measures, bike parking, etc.)?

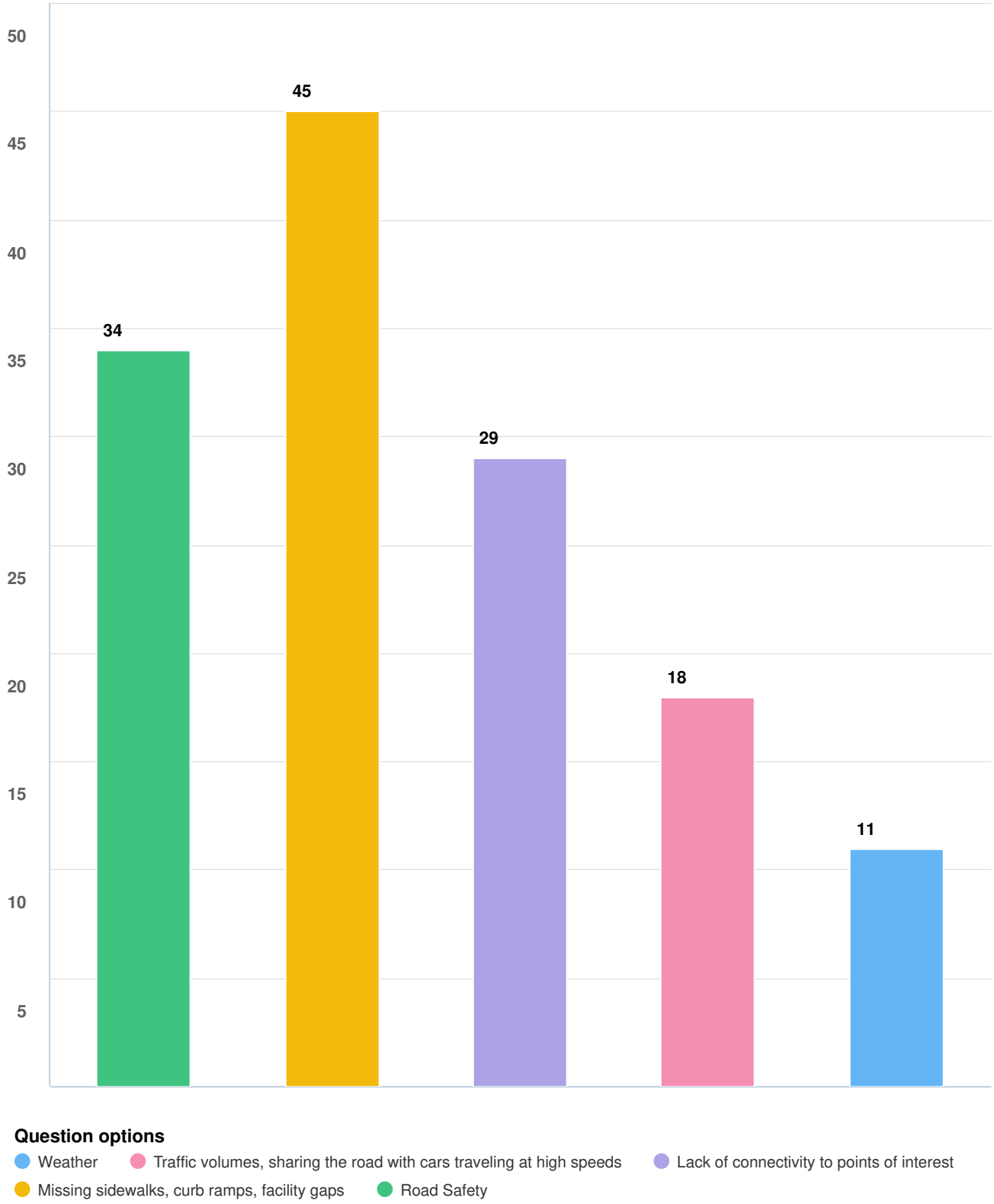


Question options

- I would like to see more bicycle facilities in SPECIFIC LOCATIONS - Please write in specific location:
- I do not BIKE for leisure/exercise/travel/commuting
- I would like to see more bicycle facilities THROUGHOUT the City
- There are enough bicycle facilities where I need them

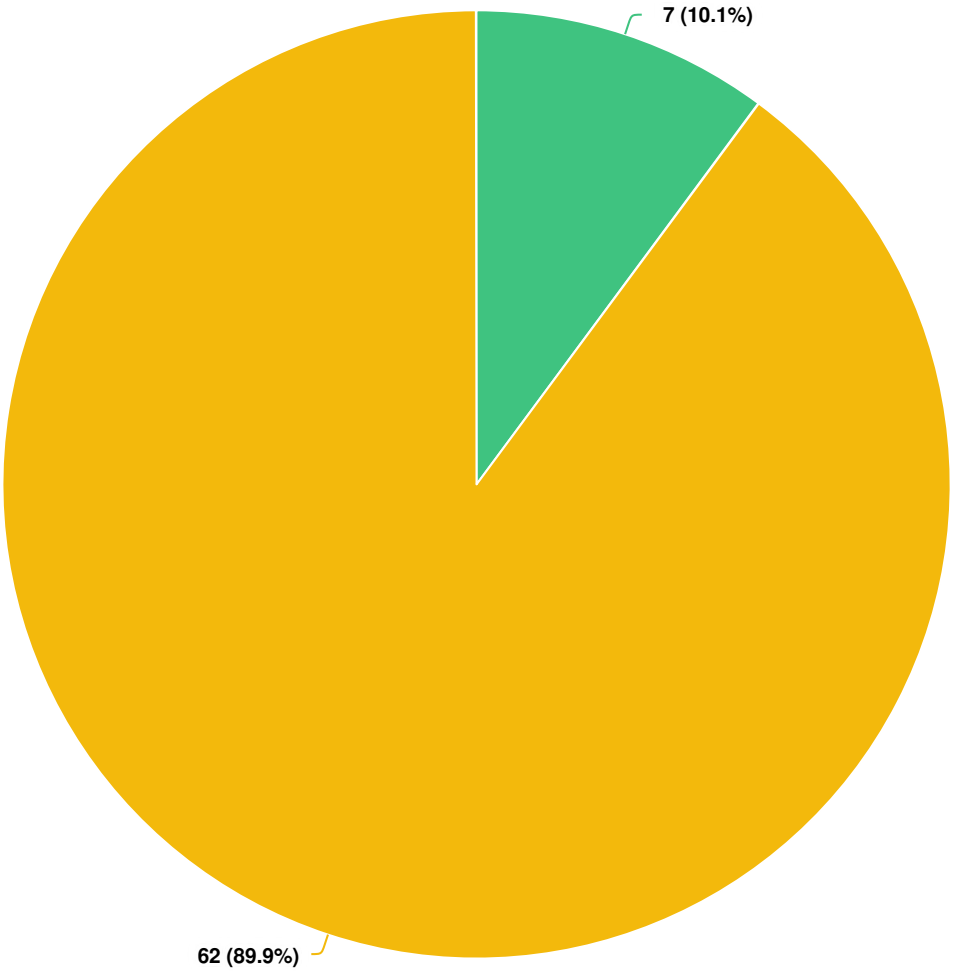
Optional question (71 response(s), 1 skipped)
Question type: Radio Button Question

Q8 What is the main barrier to walking or biking in Pearland? (select all that apply)



Optional question (70 response(s), 2 skipped)
Question type: Checkbox Question

Q9 Do you (or your family members) use mobility aids (wheelchairs, walking frames, electric scooters, etc) to travel around the local area?

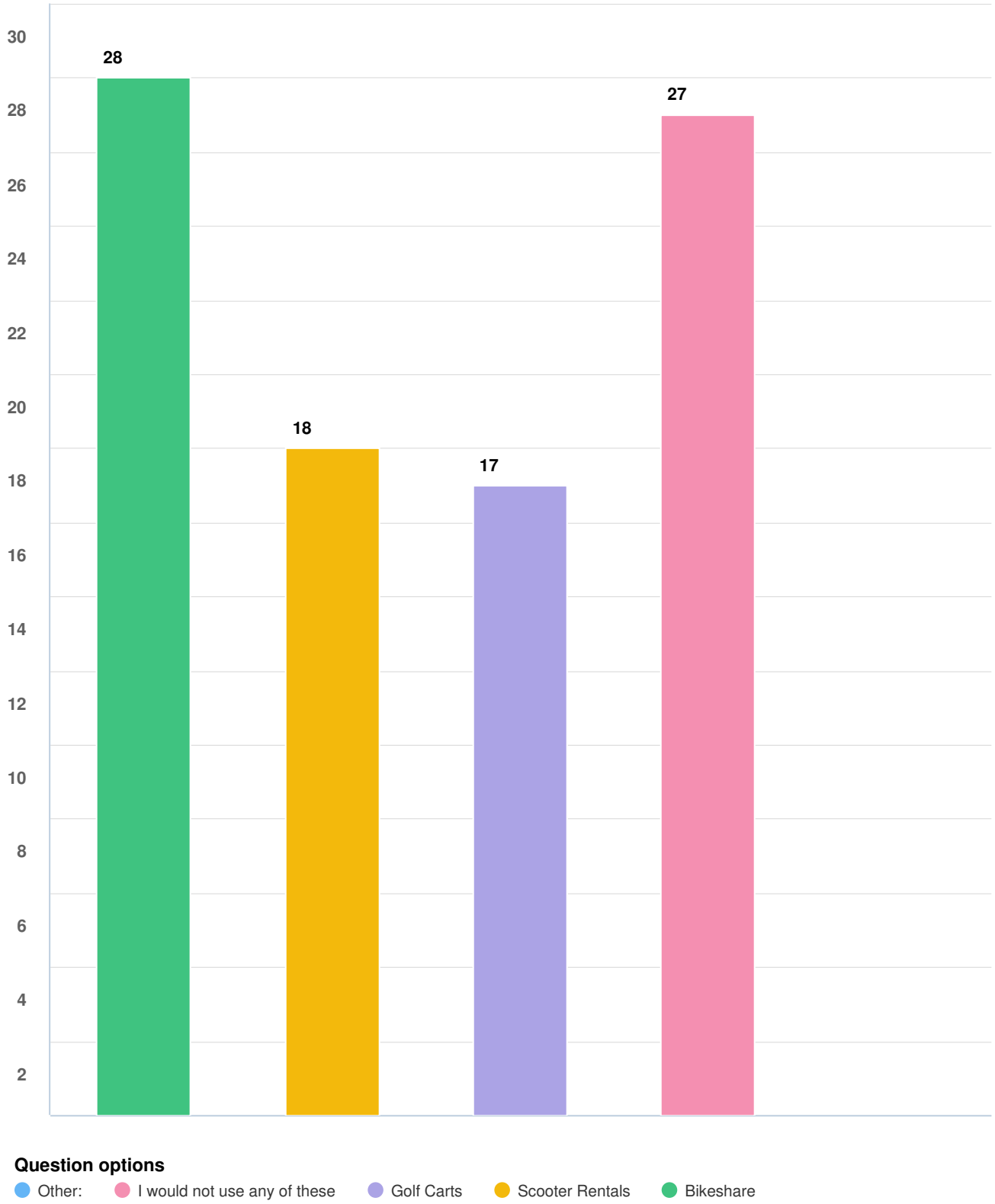


Question options

No Yes

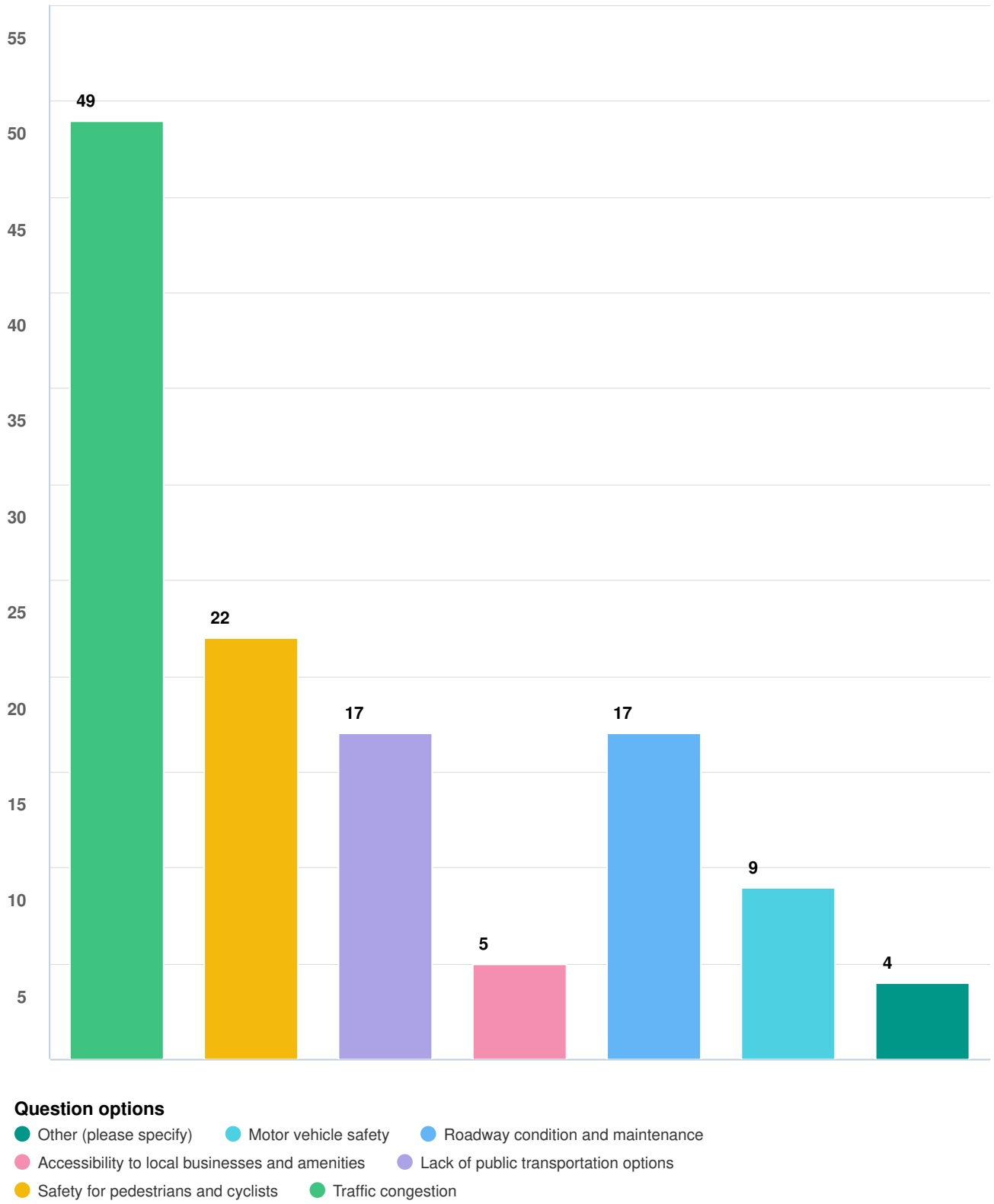
Optional question (69 response(s), 3 skipped)
Question type: Dropdown Question

Q10 If the following MICROMOBILITY options were made available in the City of Pearland, which ones would you use?



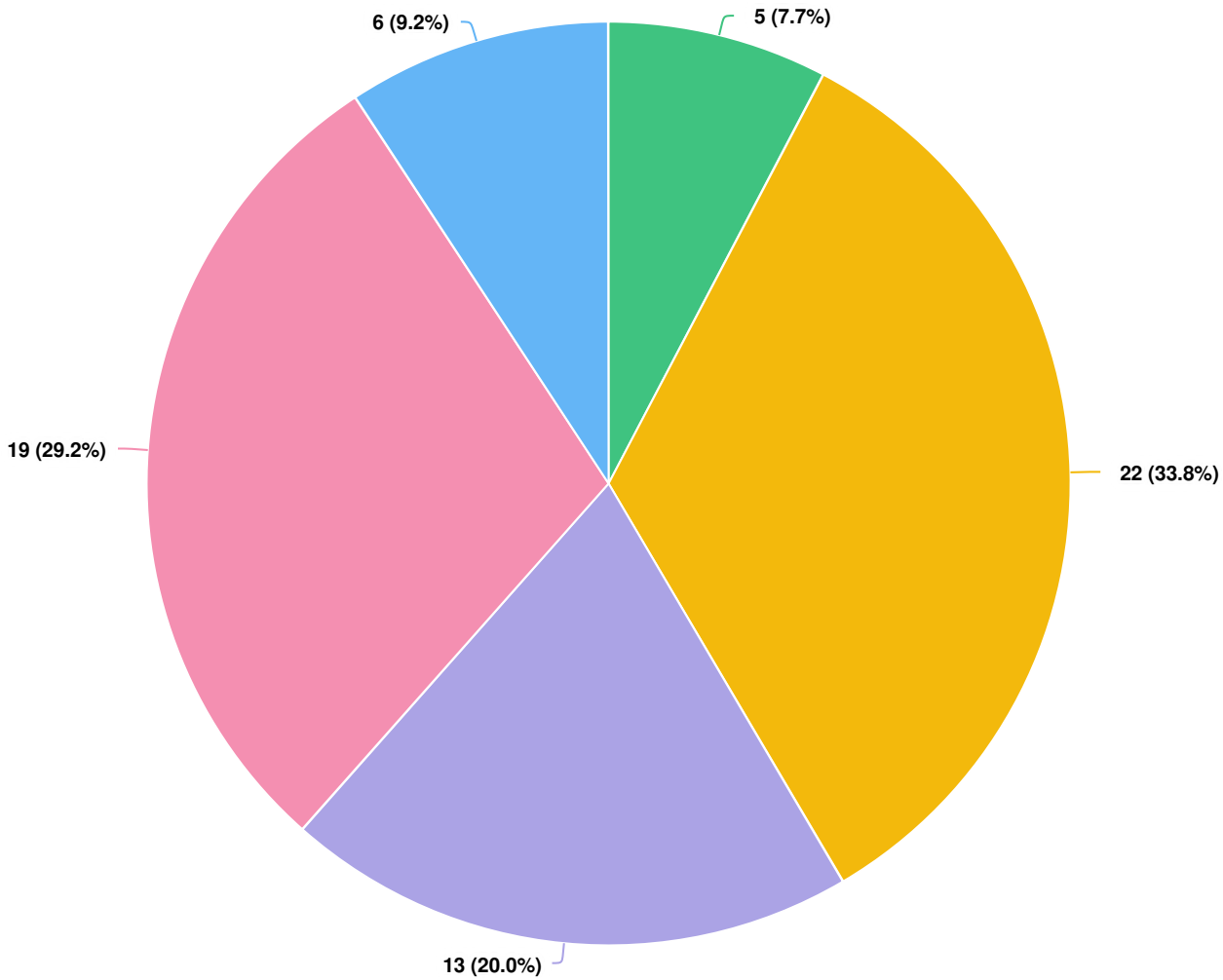
Optional question (69 response(s), 3 skipped)
Question type: Checkbox Question

Q11 What are your biggest concerns in the FM 518 Corridor (between McLean Rd. to E. Edgewood Dr.)?



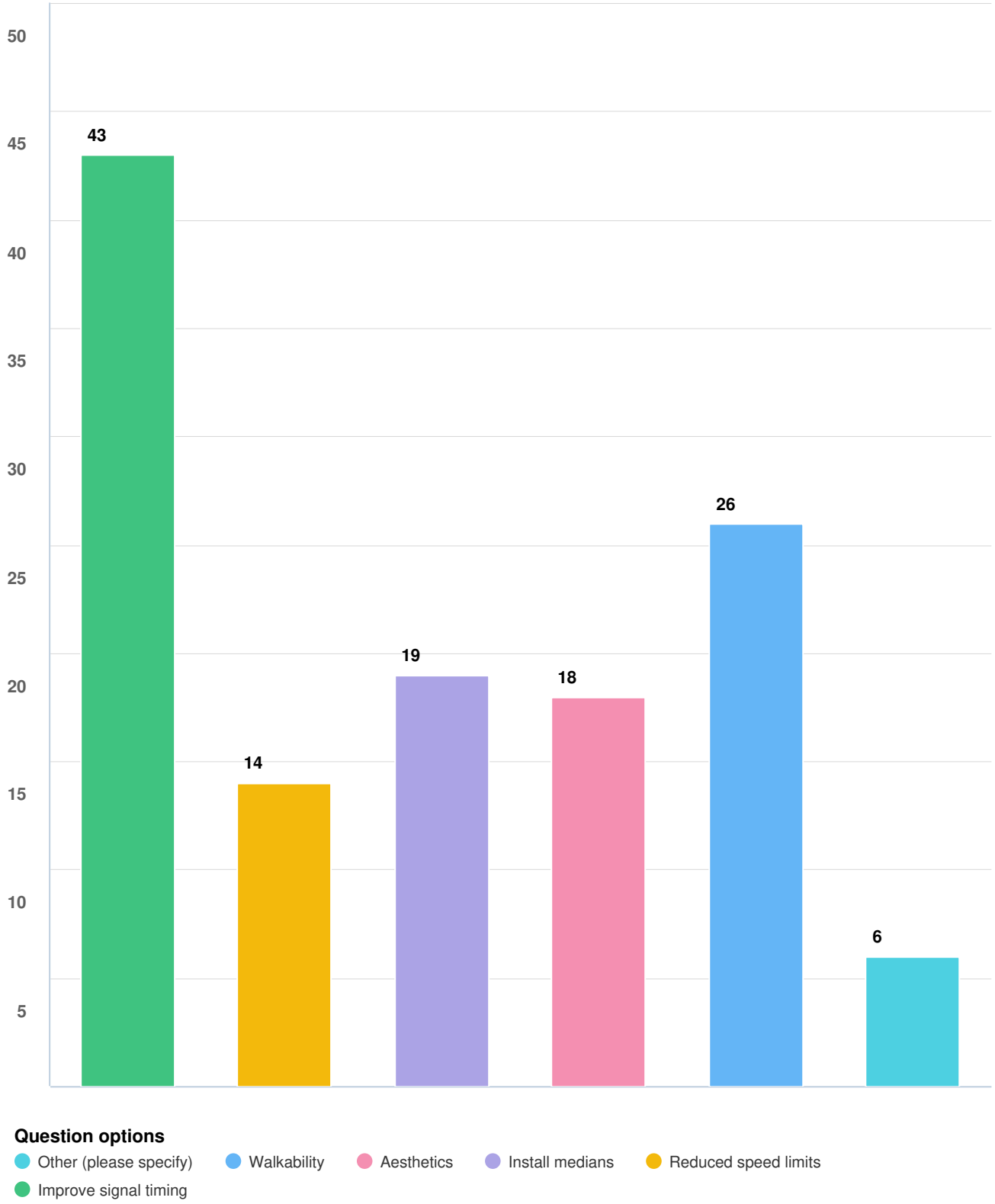
Optional question (68 response(s), 4 skipped)
Question type: Checkbox Question

Q12 Regarding traffic safety concerns, how comfortable are you while using the corridor?



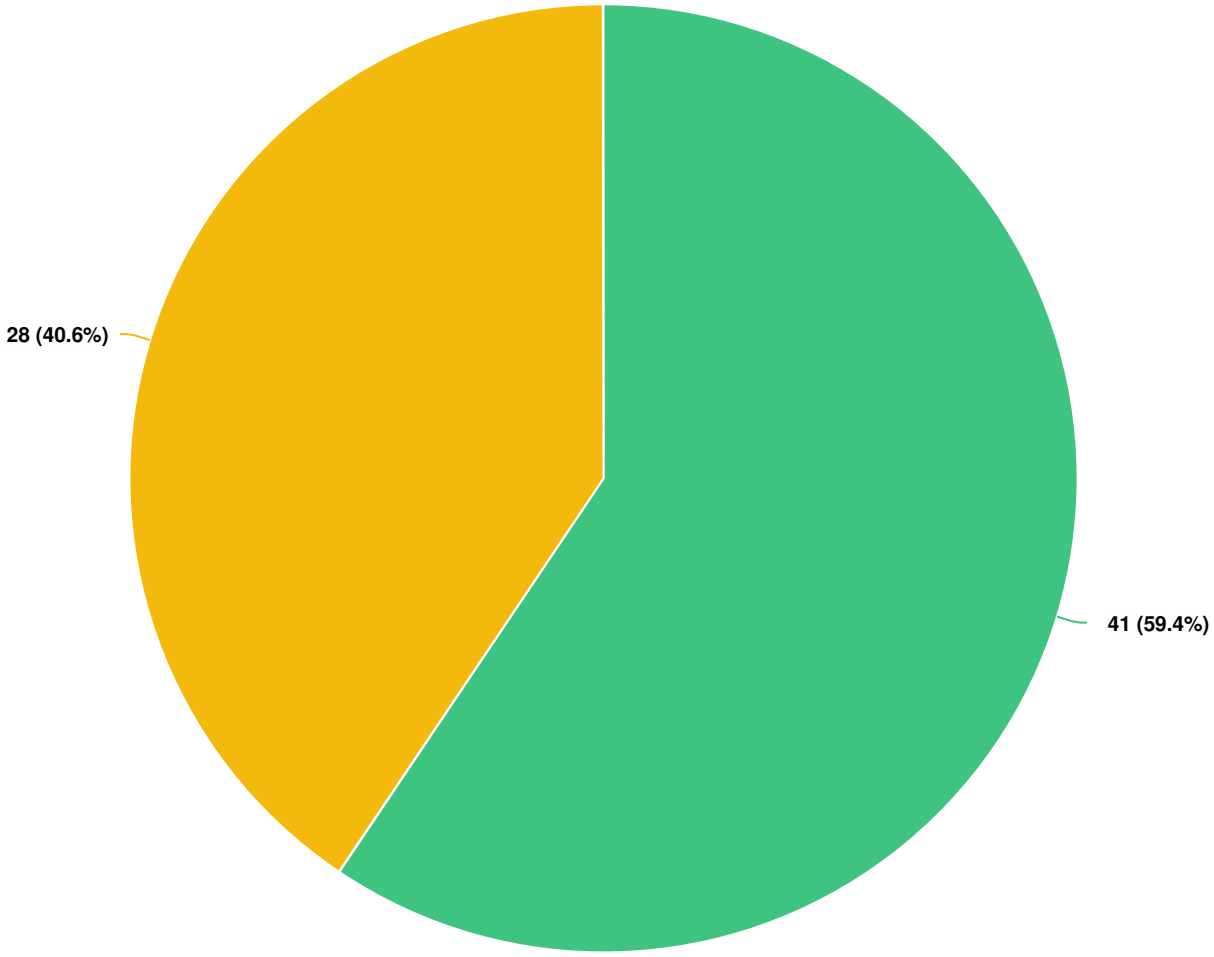
Optional question (65 response(s), 7 skipped)
Question type: Dropdown Question

Q13 What improvements can be made to improve the corridor? Pick up to three:



Optional question (69 response(s), 3 skipped)
Question type: Checkbox Question

Q14 Does the congestion of the corridor impact your usage frequency?

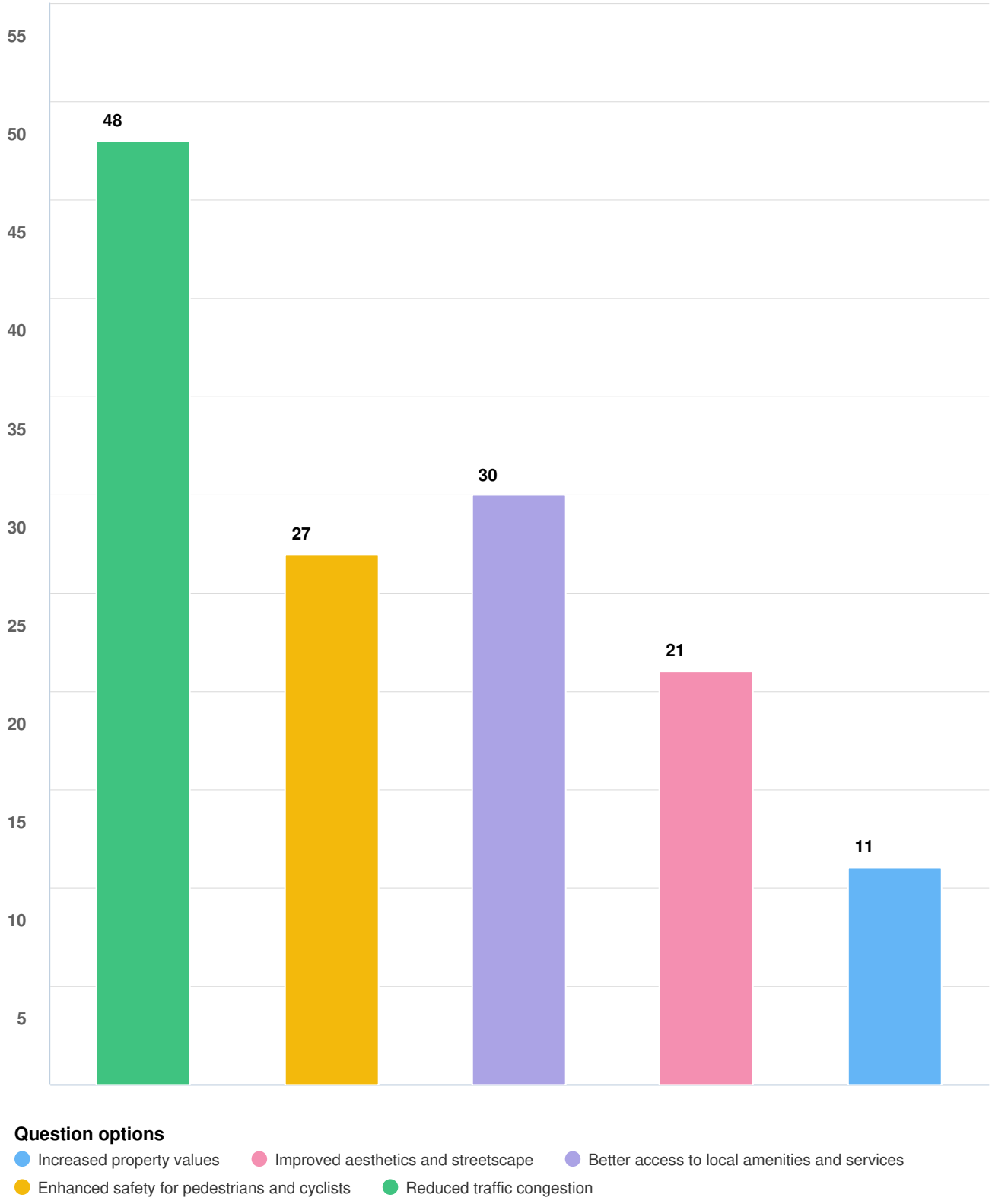


Question options

No Yes

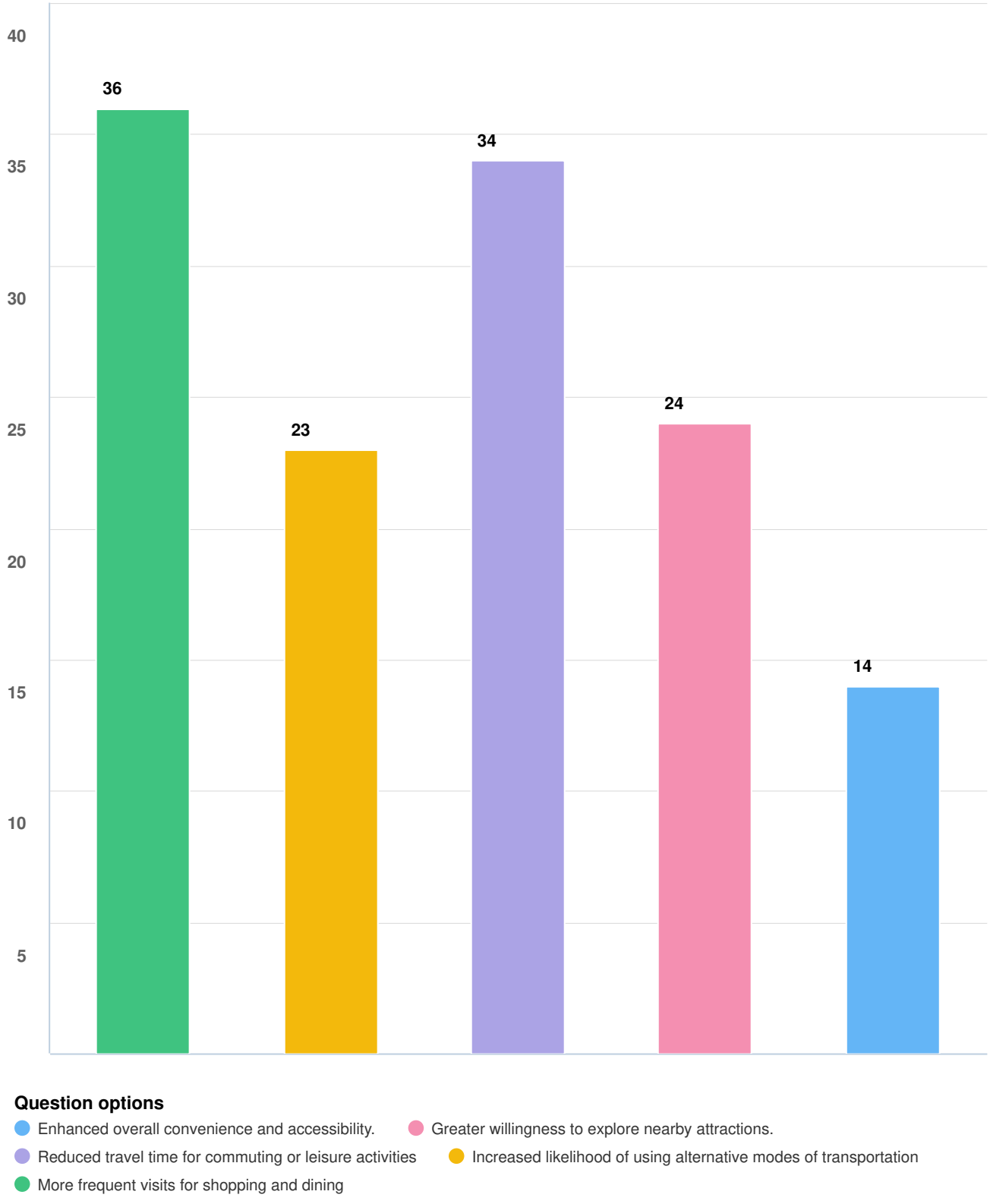
Optional question (69 response(s), 3 skipped)
Question type: Radio Button Question

Q15 How could improvements to FM 518 (between McLean Rd. and E. Edgewood Dr.) positively impact the community and local businesses? Please select one or more options from each category that you believe are most relevant.



Optional question (69 response(s), 3 skipped)
Question type: Checkbox Question

Q16 How could improvements to FM 518 (between McLean Rd. and E. Edgewood Dr.) positively impact your frequency to the corridor? Please select one or more options from each category that you believe are most relevant.



Optional question (68 response(s), 4 skipped)
Question type: Checkbox Question

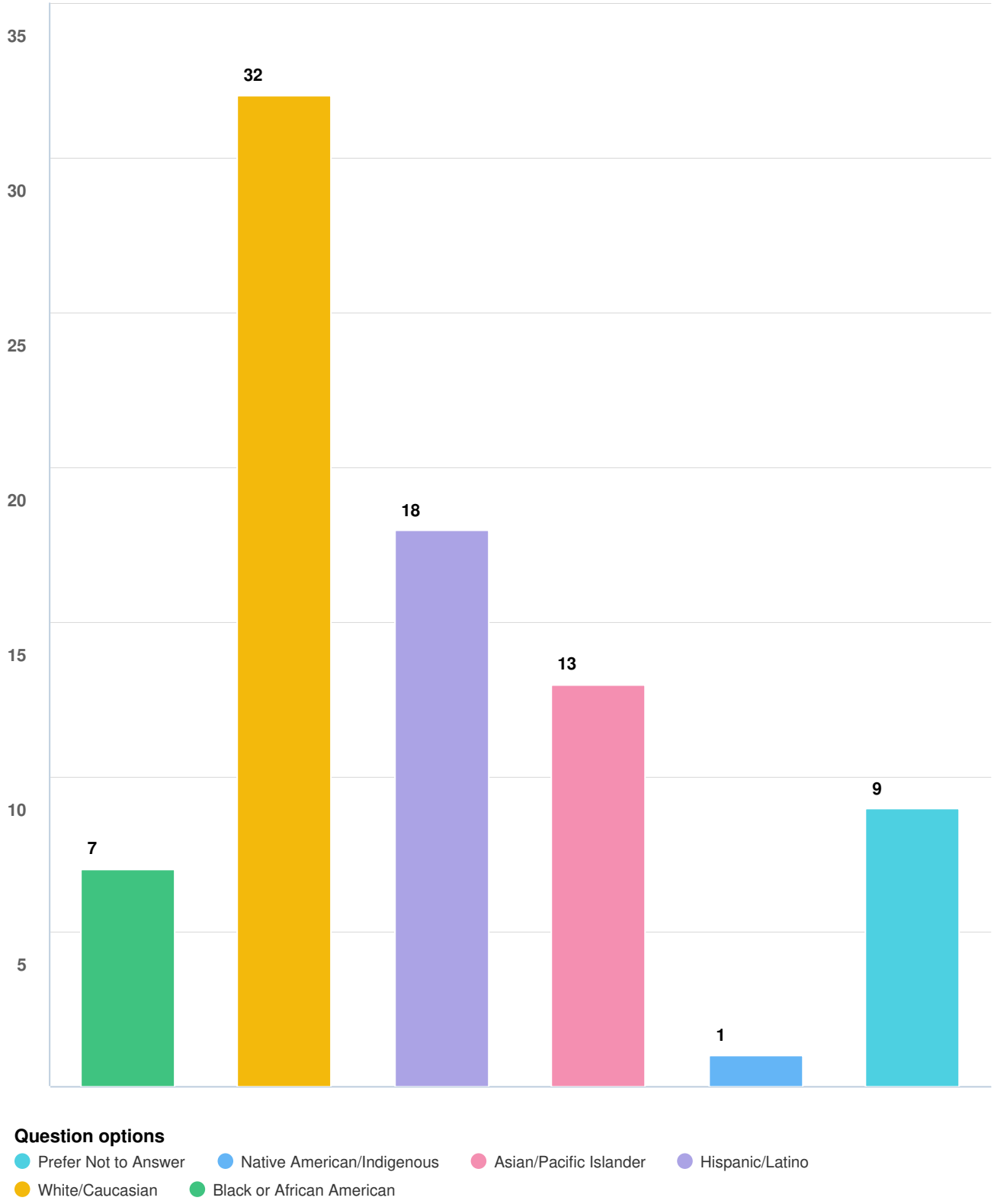
Q17 Do you have any specific suggestions or concerns related to addressing congestion, speeding, or safety for all road users on FM 518 from McLean Road and E. Edgewood Drive?

Anonymous 4/04/2024 10:42 PM	Someone needs to check the double left turn lanes at Dixie farm road and 518, I think they are sized incorrectly in the middle of the intersection. If both directions on Dixie farm road have a protected left and a vehicles are turning from the further right left turn lane and following the striping it could cause collisions.
Anonymous 4/05/2024 04:34 AM	Put cameras on the lights and give out tickets to those running red lights. That will fix it.
Anonymous 4/05/2024 06:42 AM	Sidewalks along 518 are way overdue. Also, Vehicles speeding thru the old town neighborhood from 518 to orange st. To beat the train. Speed bumps would help. It’s dangerous to walk and bike the historic and scenic neighborhood. Otherwise, Pearland is making big strides, just years too late.
Anonymous 4/05/2024 08:00 AM	Fix the traffic light timing. Keep the two way traffic so that you can have access to all businesses from either direction.
Anonymous 4/05/2024 08:20 AM	No sidewalks and existing roads are in disrepair.
Anonymous 4/05/2024 06:01 PM	Remove the medians and raise the speed limit
Anonymous 4/06/2024 07:47 AM	Timing the lights
Anonymous 4/06/2024 08:04 AM	Na
Anonymous 4/06/2024 08:20 AM	No
Anonymous 4/06/2024 08:31 AM	No

Anonymous 4/06/2024 08:32 AM	No
Anonymous 4/06/2024 08:37 AM	Visible signage
Anonymous 4/06/2024 10:00 AM	No
Anonymous 4/06/2024 10:13 AM	Need stop sign on the crosswalk between the track field and St Helen's Church, on old Alvin
Anonymous 4/06/2024 10:22 AM	No.
Anonymous 4/06/2024 11:06 AM	No
Anonymous 4/06/2024 01:31 PM	NA
Anonymous 4/08/2024 09:14 AM	No
Anonymous 4/08/2024 01:47 PM	No
Anonymous 4/08/2024 08:55 PM	n/a
Anonymous 4/09/2024 06:38 AM	None
Anonymous 4/09/2024 07:42 PM	No.

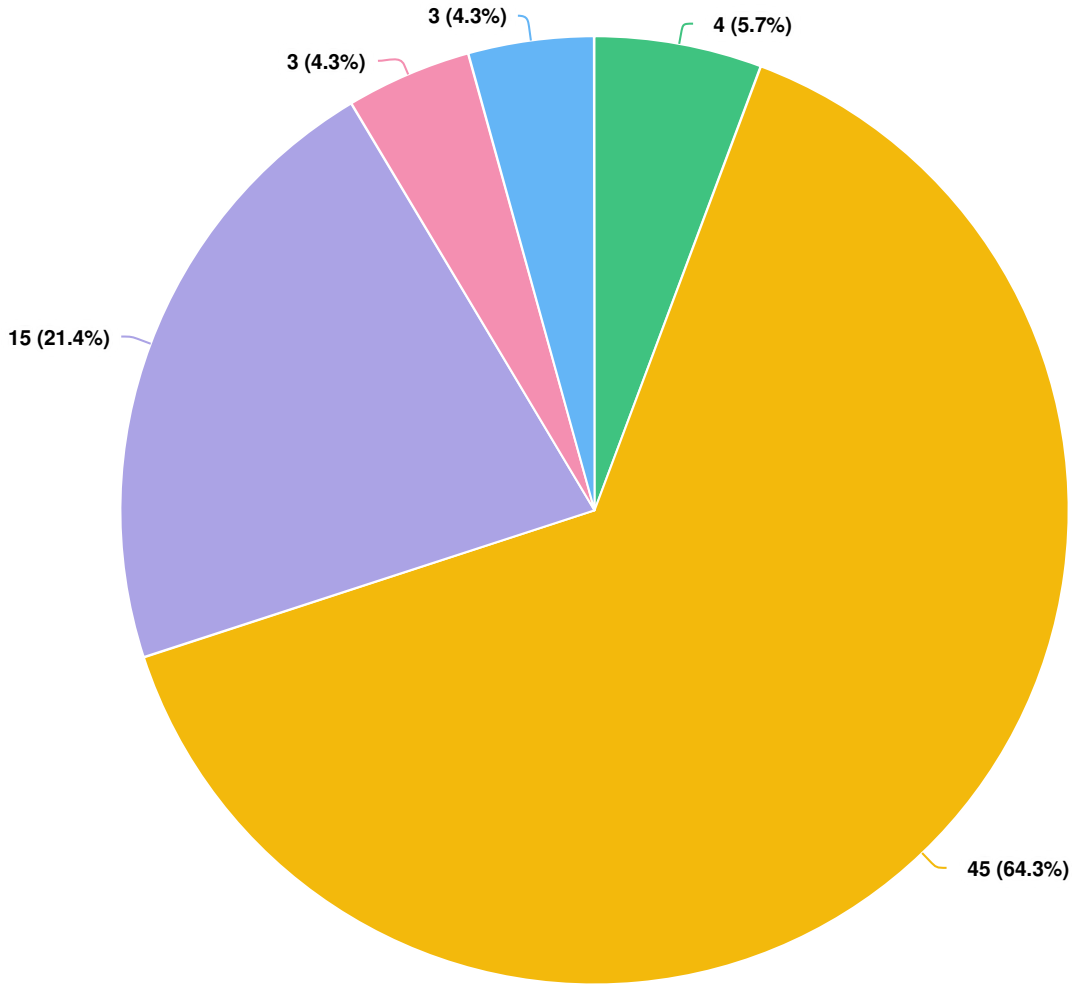
Optional question (22 response(s), 50 skipped)
Question type: Essay Question

Q18 Please Indicate your race and/or ethnicity: (Select all that apply)



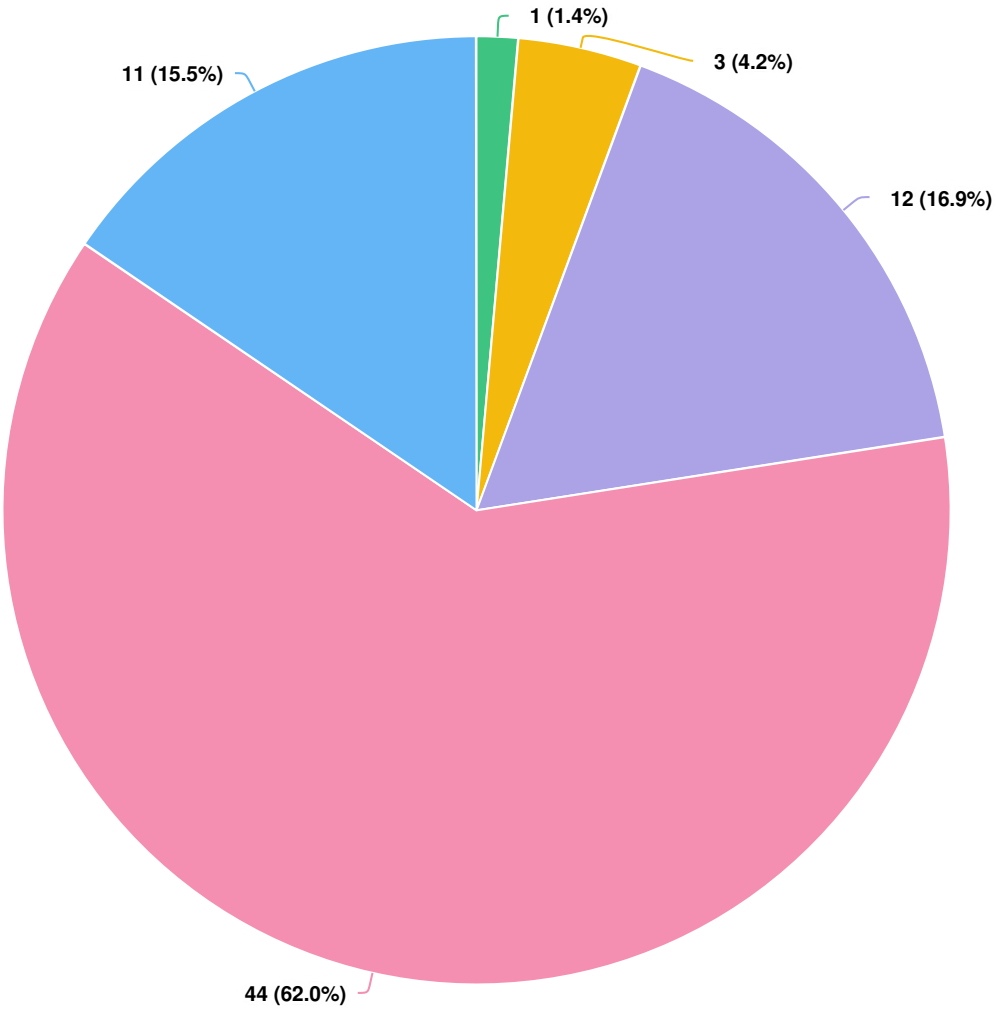
Optional question (71 response(s), 1 skipped)
Question type: Checkbox Question

Q19 What is your age?



Optional question (70 response(s), 2 skipped)
Question type: Radio Button Question

Q20 Please indicate your annual income:

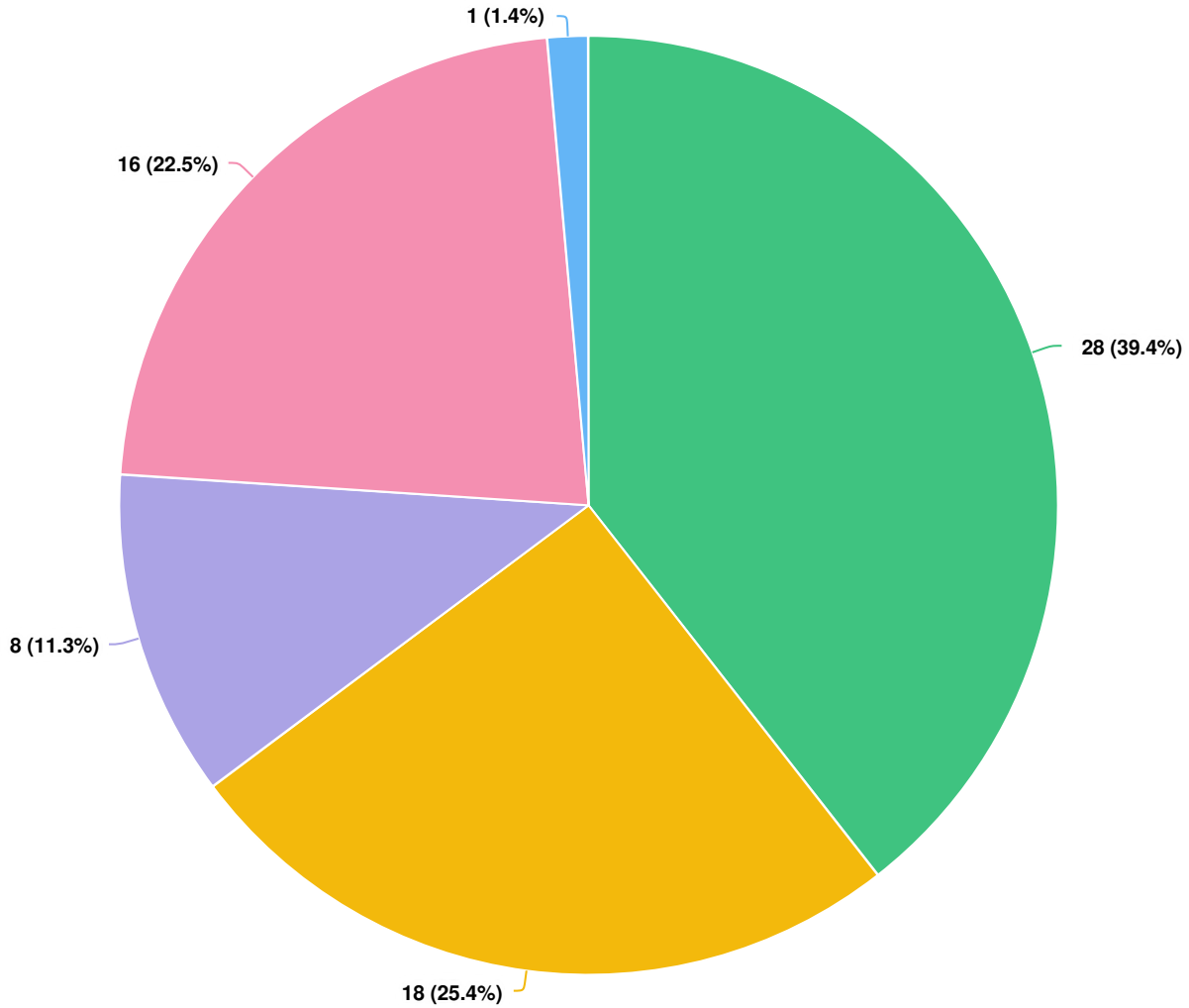


Question options

Prefer Not to Answer | $75,001+ | $50,001 - $75,000 | $25,001 - $50,000 | $25,000 or less

Optional question (71 response(s), 1 skipped)
Question type: Radio Button Question

Q21 How long have you lived or worked in Pearland, if applicable? (select one)



Question options

I don't live/work in Pearland | 20+ years | 11 – 20 years | 6 – 10 years | 0 – 5 years

Optional question (71 response(s), 1 skipped)
Question type: Radio Button Question

Project Report

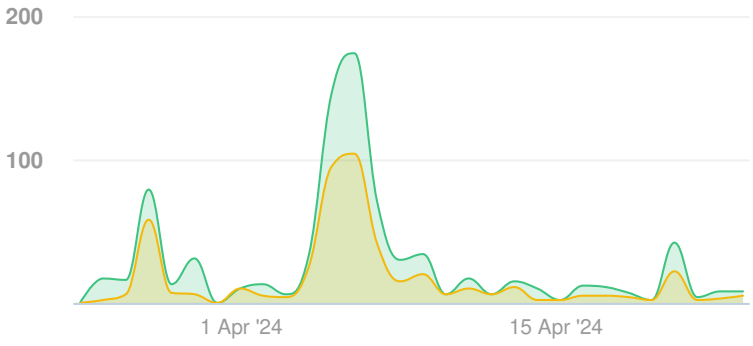
24 March 2024 - 22 April 2024

Engage HGAC

Pearland FM 518 Corridor Study (from McLean Road to E. Edgewood Drive)

BANG THE TABLE engagementHQ

Visitors Summary



Highlights

TOTAL VISITS
525

MAX VISITORS PER DAY
104

NEW REGISTRATIONS
2

ENGAGED VISITORS
139

INFORMED VISITORS
192

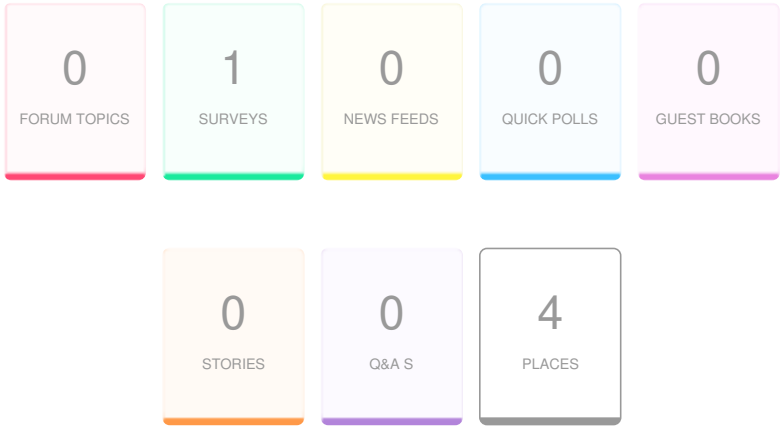
AWARE VISITORS
444

Aware Participants	444
Aware Actions Performed	**Participants**
Visited a Project or Tool Page	444

Informed Participants	192
Informed Actions Performed	**Participants**
Viewed a video	0
Viewed a photo	0
Downloaded a document	2
Visited the Key Dates page	8
Visited an FAQ list Page	0
Visited Instagram Page	0
Visited Multiple Project Pages	43
Contributed to a tool (engaged)	139

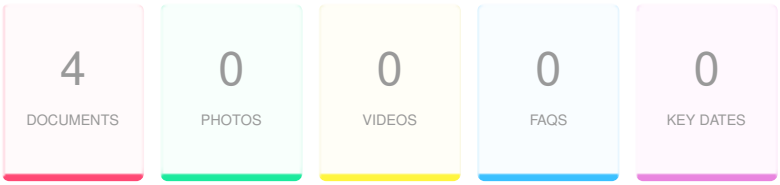
Engaged Participants	139		
Engaged Actions Performed	**Registered**	**Unverified**	**Anonymous**
Contributed on Forums	0	0	0
Participated in Surveys	0	0	138
Contributed to Newsfeeds	0	0	0
Participated in Quick Polls	0	0	0
Posted on Guestbooks	0	0	0
Contributed to Stories	0	0	0
Asked Questions	0	0	0
Placed Pins on Places	1	0	0
Contributed to Ideas	0	0	0

ENGAGEMENT TOOLS SUMMARY



Tool Type	Engagement Tool Name	Tool Status	Visitors	Contributors		
				Registered	Unverified	Anonymous
Place	Thank you for your participation. Check back soon for sur...	Draft	26	1	0	0
Survey Tool	Thank you for your participation. Check back soon for sur...	Draft	231	0	0	138

INFORMATION WIDGET SUMMARY



Widget Type	Engagement Tool Name	Visitors	Views/Downloads
Key Dates	Key Date	8	8
Document	Pearland Studies Flyer - English	2	2
Document	FM 518 Corridor Study Project Fact Sheet - English	2	2
Document	Pearland Studies Flyer - Spanish	0	0
Document	FM 518 Corridor Study Project Fact Sheet - Spanish	0	0

ENGAGEMENT TOOL: PLACE

Thank you for your participation. Check back soon for survey results.

Visitors 26	Contributors 1	CONTRIBUTIONS 11

2024-04-05 11:13:55 -0700
constable3

CATEGORY
Congestion

Needs a "do not block enforcement"
Address: 3804 East Broadway Street, Pearland, Texas 77581, United States

http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105523

2024-04-05 11:14:46 -0700
constable3

CATEGORY
Safety

needs traffic light control
Address: 2403 South Austin Avenue, Pearland, Texas 77581, United States

http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105524

2024-04-05 11:15:41 -0700
constable3

CATEGORY
Improvements Needed

Needs traffic light
Address: 5420 West Broadway Street, Pearland, Texas 77581, United States

http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105525

2024-04-05 11:17:36 -0700
constable3

CATEGORY
Improvements Needed

Needs to be tied to 518
Address: 2641 Veterans Road, Pearland, Texas 77584, United States

http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105526

2024-04-05 11:18:02 -0700
constable3

CATEGORY
Improvements Needed

Needs grade work
Address: 4103 West Walnut Street, Pearland, Texas 77581, United States

http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105527

2024-04-05 11:18:19 -0700
constable3

CATEGORY
Improvements Needed

Needs grade work
Address: 4104 West Broadway Street, Pearland, Texas 77581, United States

http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105528

2024-04-05 11:18:38 -0700
constable3

CATEGORY
Improvements Needed

Needs grade work
Address: 4102 West Orange Street, Pearland, Texas 77581, United States

http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105529

ENGAGEMENT TOOL: PLACE

Thank you for your participation. Check back soon for survey results.

2024-04-05 11:20:07 -0700
constable3
CATEGORY
Safety

Needs traffic signal
Address: 3100 East Broadway Street, Pearland, Texas 77581, United States

http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105532

2024-04-05 11:20:54 -0700
constable3
CATEGORY
Safety

This whole area needs traffic control device of some sort
Address: 2906 East Broadway Street, Pearland, Texas 77581, United States

http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105533

2024-04-05 11:22:32 -0700
constable3
CATEGORY
Congestion

THis will eventually need de-exceleration lanes for school
Address: 2426 East Broadway Street, Pearland, Texas 77581, United States

http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105534

2024-04-05 11:35:45 -0700
constable3
CATEGORY
Congestion

I did not see an survey that delt with the issue of making Walnut a one way eastbound and 518 a west bound roadway. I am in favor of seeing this come to fruition.... the ONLY alternative would be if enough ROW exist to widen 518 for 7 lanes of flow... which i doubt
Address: 4706 West Walnut Street, Pearland, Texas 77581, United States

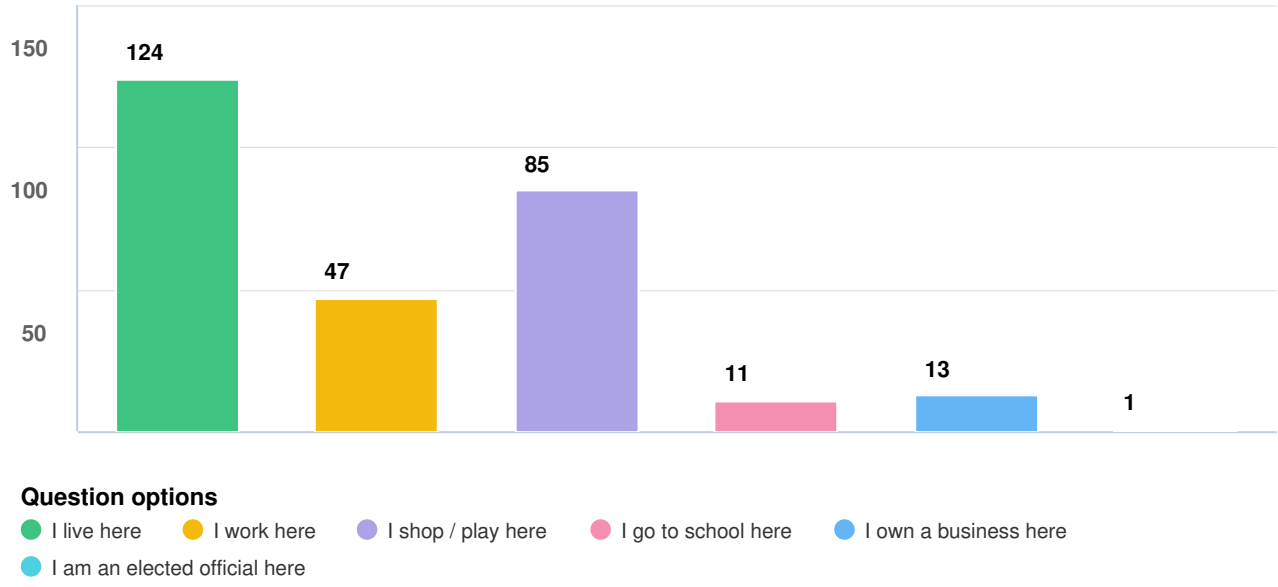
http://engage.h-gac.com/fm-518-corridor-study/maps/thank-you-for-your-participation-check-back-soon-for-survey-results?reporting=true#marker-105536

ENGAGEMENT TOOL: SURVEY TOOL

Thank you for your participation. Check back soon for survey results.

Visitors 231	Contributors 138	CONTRIBUTIONS 138

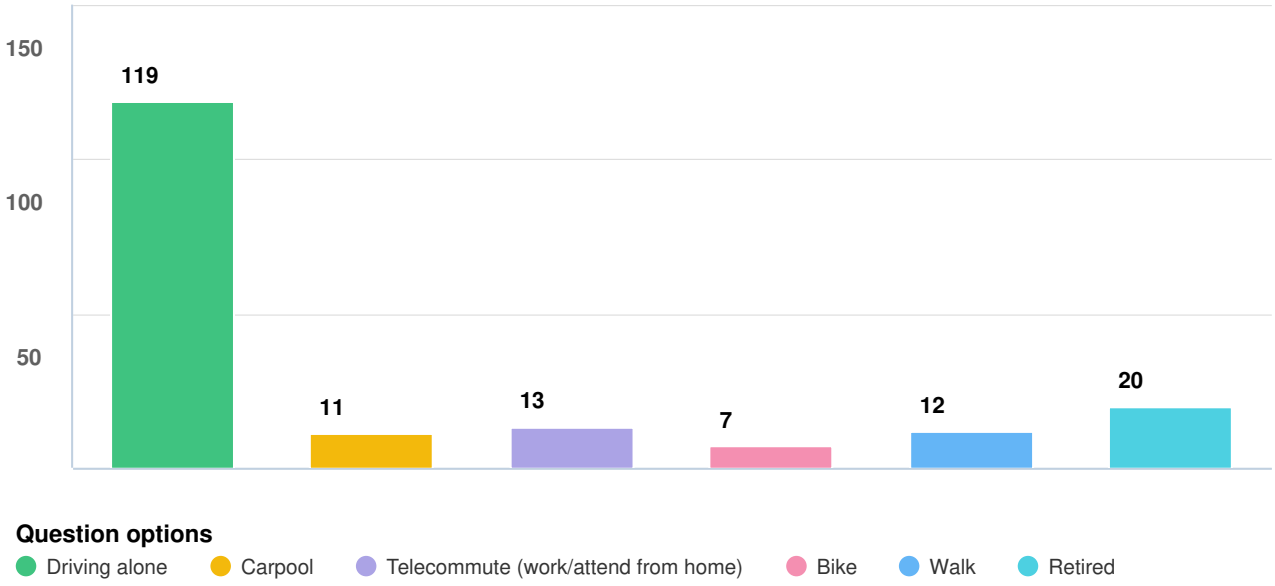
What do you do in the City of Pearland? (select all that apply)



Optional question (137 response(s), 1 skipped)

Question type: Checkbox Question

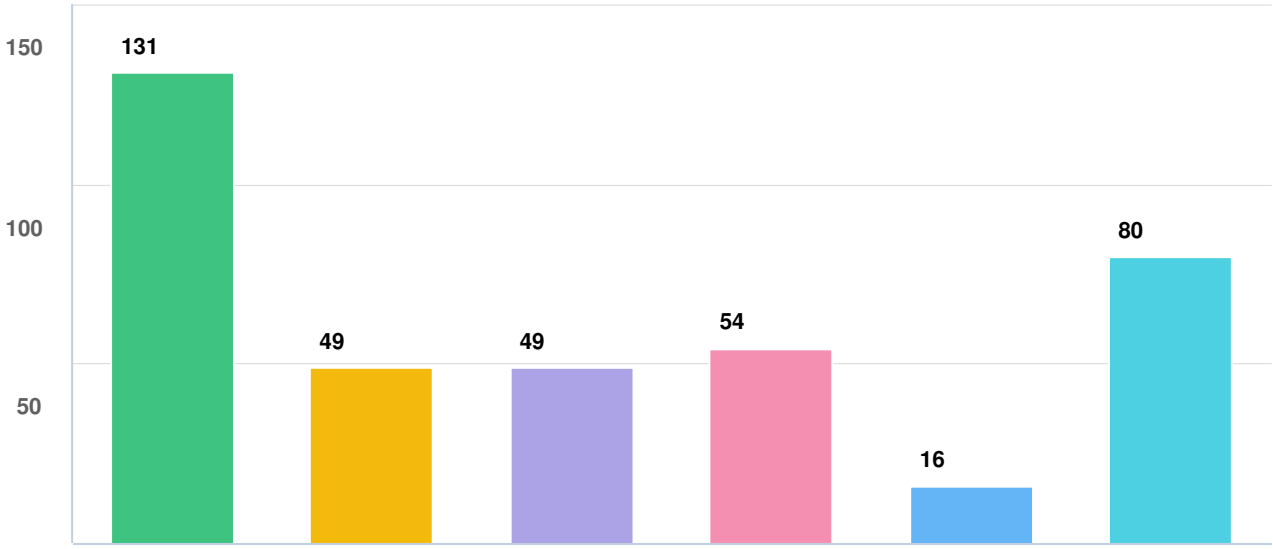
What is your primary mode of travel to work or school? (select all that apply)



Optional question (136 response(s), 2 skipped)

Question type: Checkbox Question

Which type of community services and facilities within the City of Pearland do you use most often? (select all that apply)



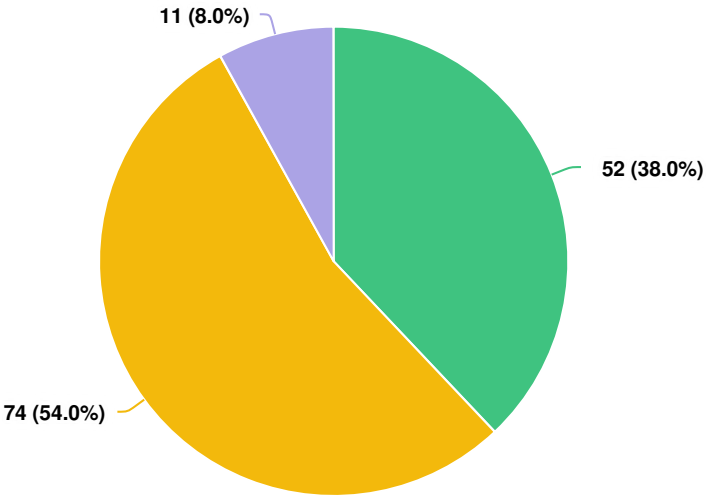
Question options

Shopping / entertainments areas
Hospitals / medical centers
Community / event centers
K-12 schools
Childcare
Recreation facilities / parks

Optional question (136 response(s), 2 skipped)

Question type: Checkbox Question

How would you describe the existing AUTOMOBILE TRAFFIC within the City of Pearland?



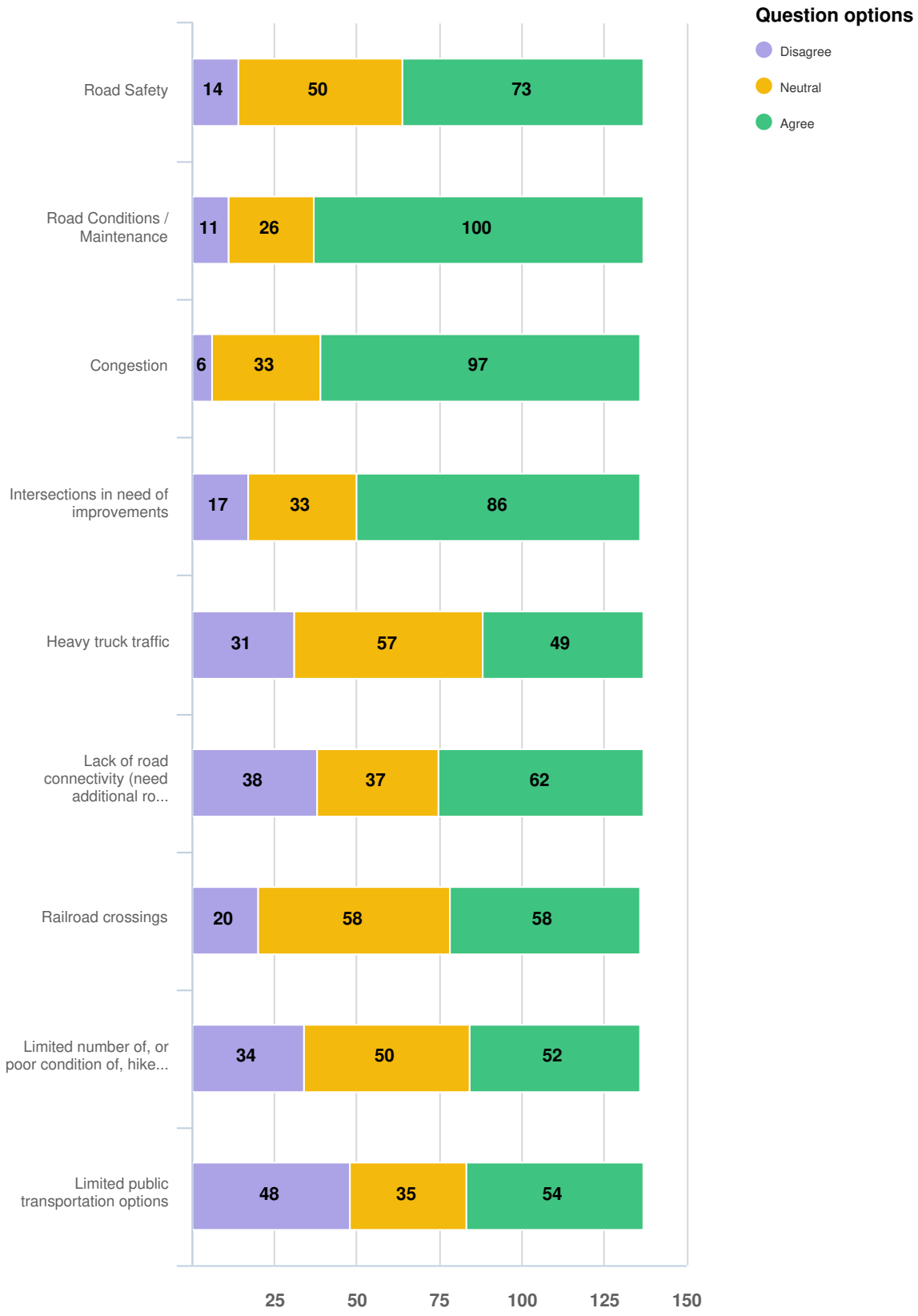
Question options

- About the same as nearby communities
- More congested than nearby communities
- Less congested than nearby communities

Optional question (137 response(s), 1 skipped)

Question type: Dropdown Question

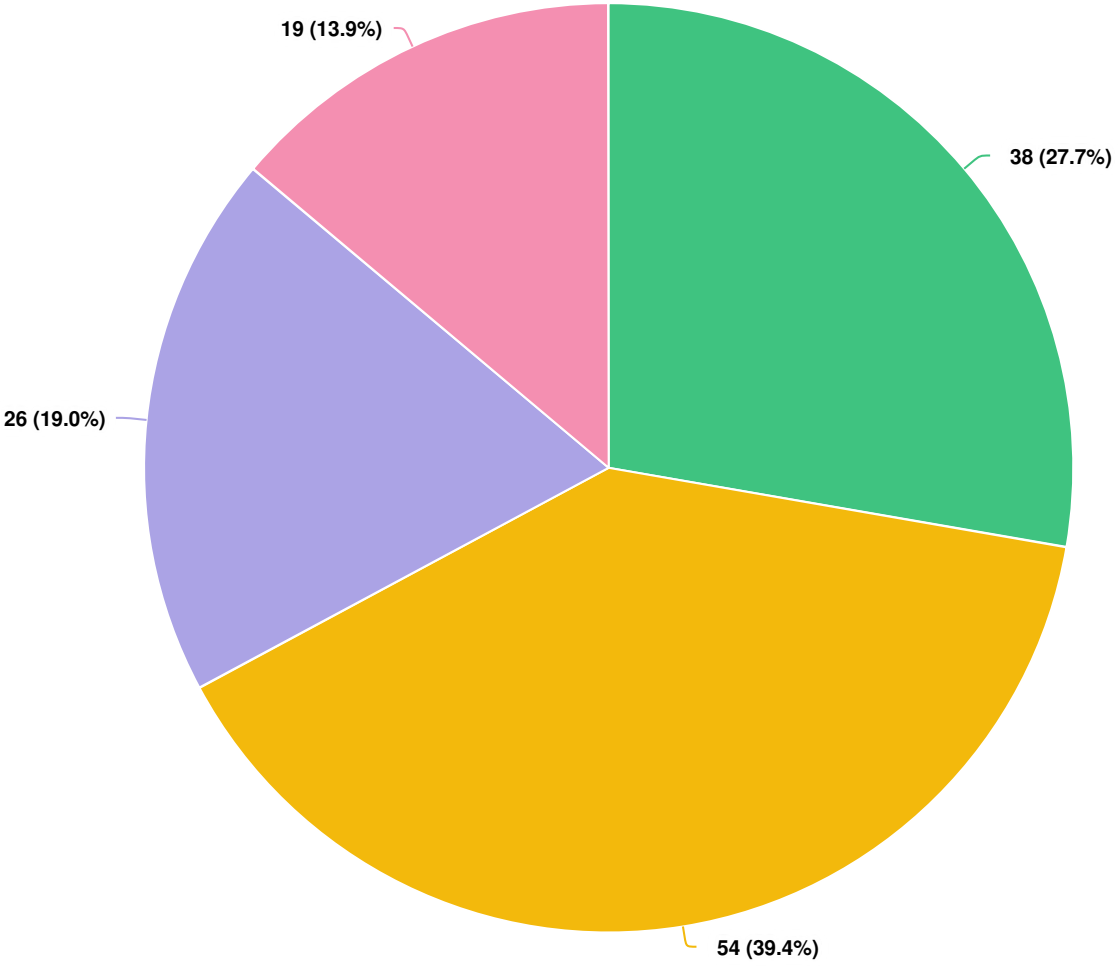
Please let us know if the following transportation issues are of concern in the City of Pearland.



Optional question (137 response(s), 1 skipped)

Question type: Likert Question

How would you describe the existing PEDESTRIAN facilities and amenities (sidewalks / trails, curb ramps, lighting, benches, shade trees, crosswalks, pedestrian islands, audio-assisted crossings, push buttons, etc.)?



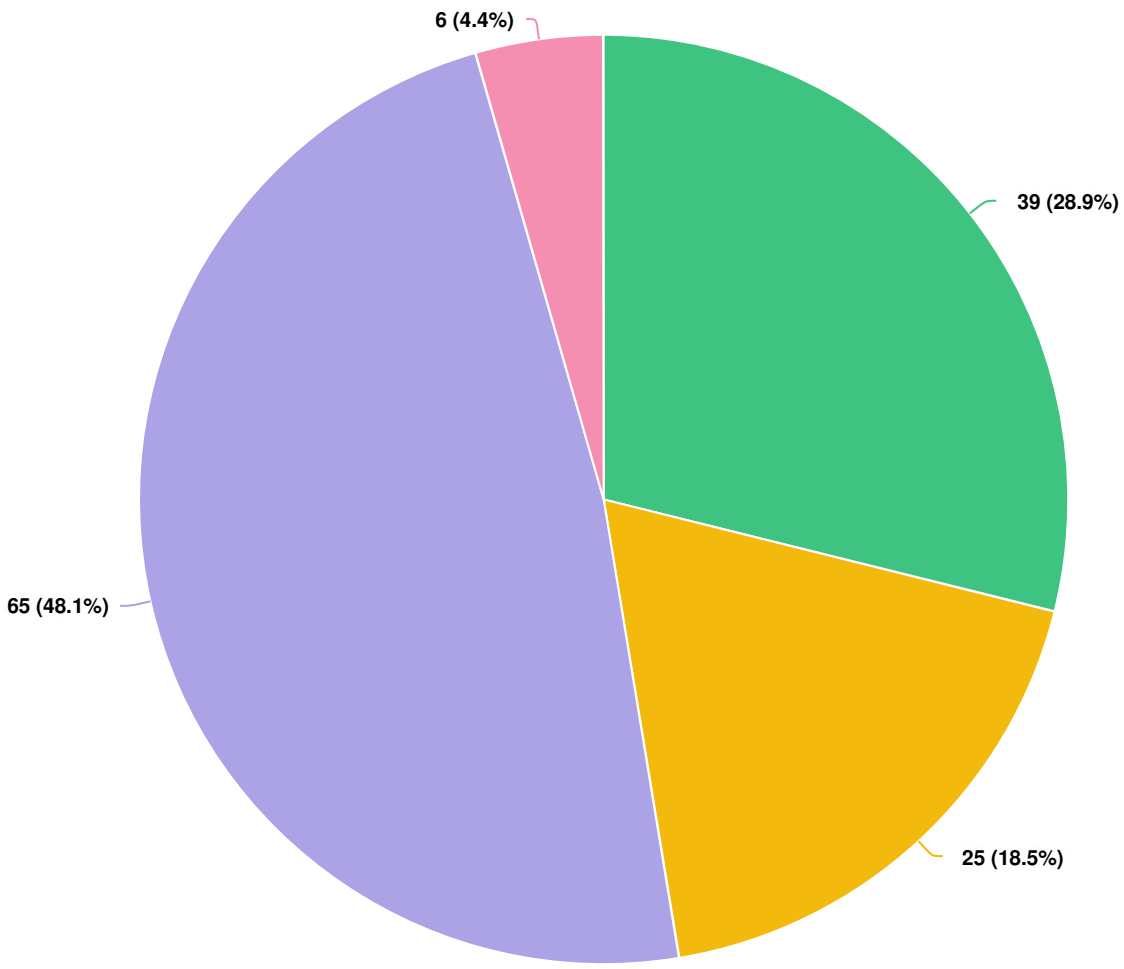
Question options

- I would like to see more pedestrian facilities and amenities in SPECIFIC locations - Please write in the specific location:
- I do not WALK for leisure/travel/commuting
- I would like to see more pedestrian facilities and amenities THROUGHOUT the City
- There are enough pedestrian facilities and amenities where I need them

Optional question (137 response(s), 1 skipped)

Question type: Radio Button Question

How would you describe the existing BICYCLE facilities (bike lanes, share-use paths, safety measures, bike parking, etc.)?



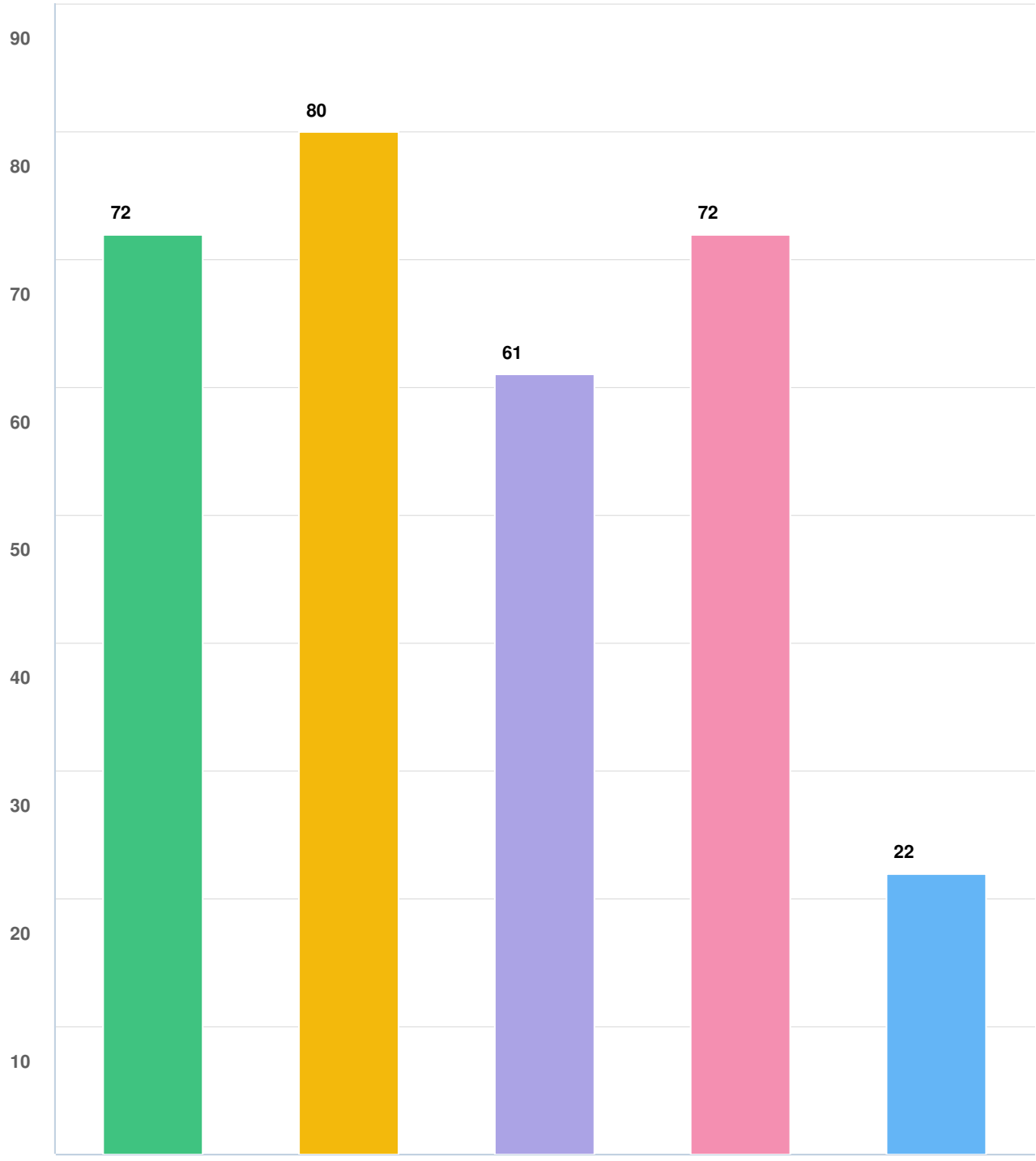
Question options

- I would like to see more bicycle facilities in SPECIFIC LOCATIONS - Please write in specific locations:
- I do not BIKE for leisure/exercise/travel/commuting
- There are enough bicycle facilities where I need them
- I would like to see more bicycle facilities THROUGHOUT the City

Optional question (135 response(s), 3 skipped)

Question type: Radio Button Question

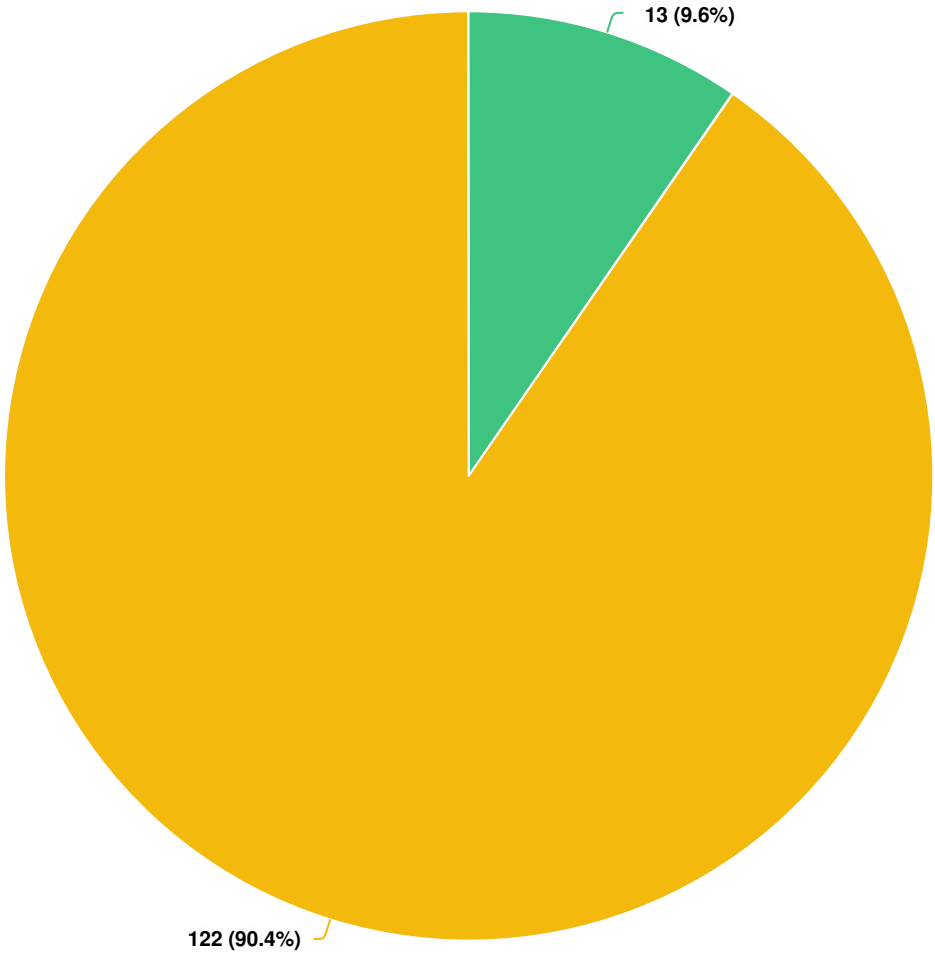
What is the main barrier to walking or biking in Pearland? (select all that apply)



Optional question (131 response(s), 7 skipped)

Question type: Checkbox Question

Do you (or your family members) use mobility aids (wheelchairs, walking frames, electric scooters, etc) to travel around the local area?



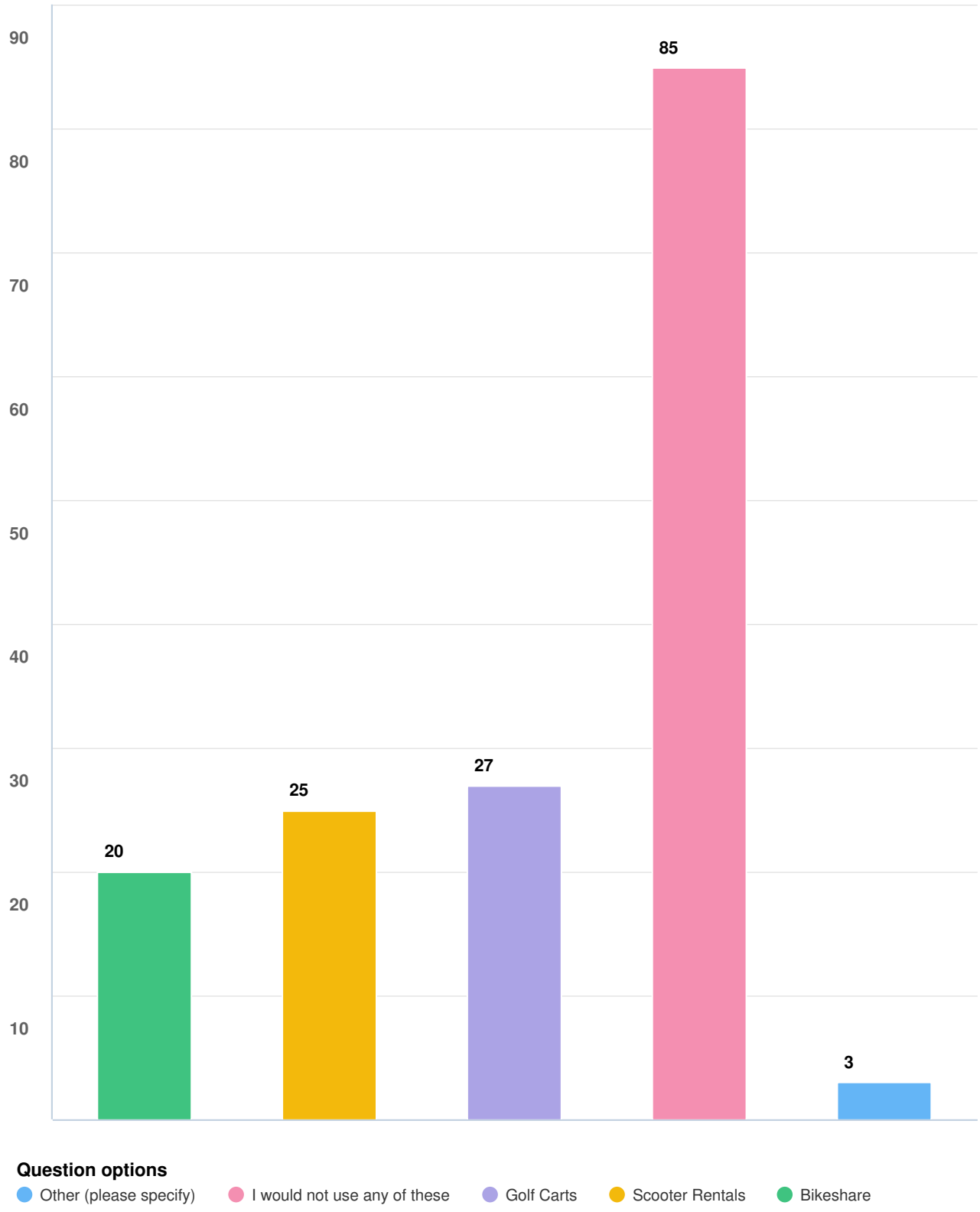
Question options

No Yes

Optional question (135 response(s), 3 skipped)

Question type: Dropdown Question

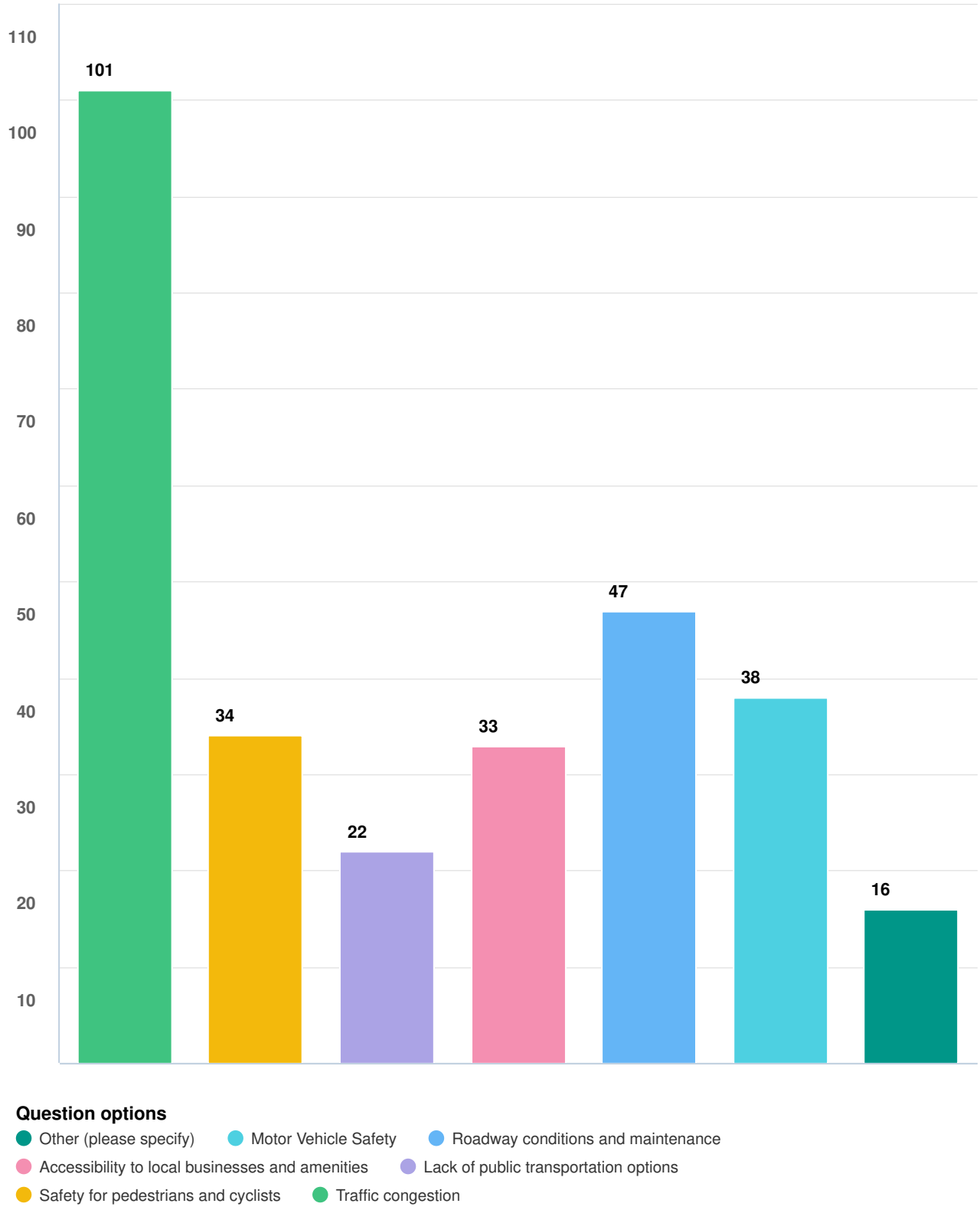
If the following MICROMOBILITY options were made available in the City of Pearland, which ones would you use?



Optional question (132 response(s), 6 skipped)

Question type: Checkbox Question

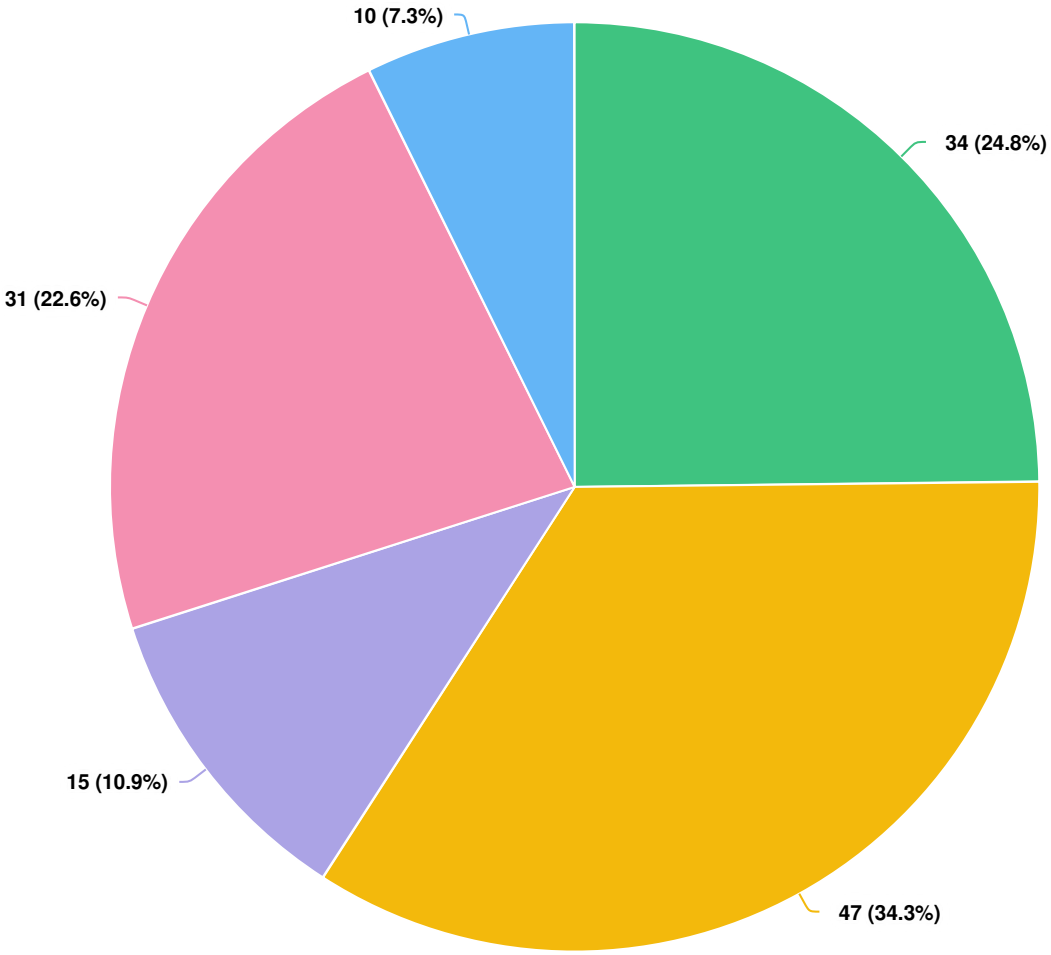
What are your biggest concerns in the FM 518 Corridor (between McLean Rd. to E. Edgewood Dr.)?



Optional question (136 response(s), 2 skipped)

Question type: Checkbox Question

Regarding traffic safety concerns, how comfortable do you feel accessing this corridor?



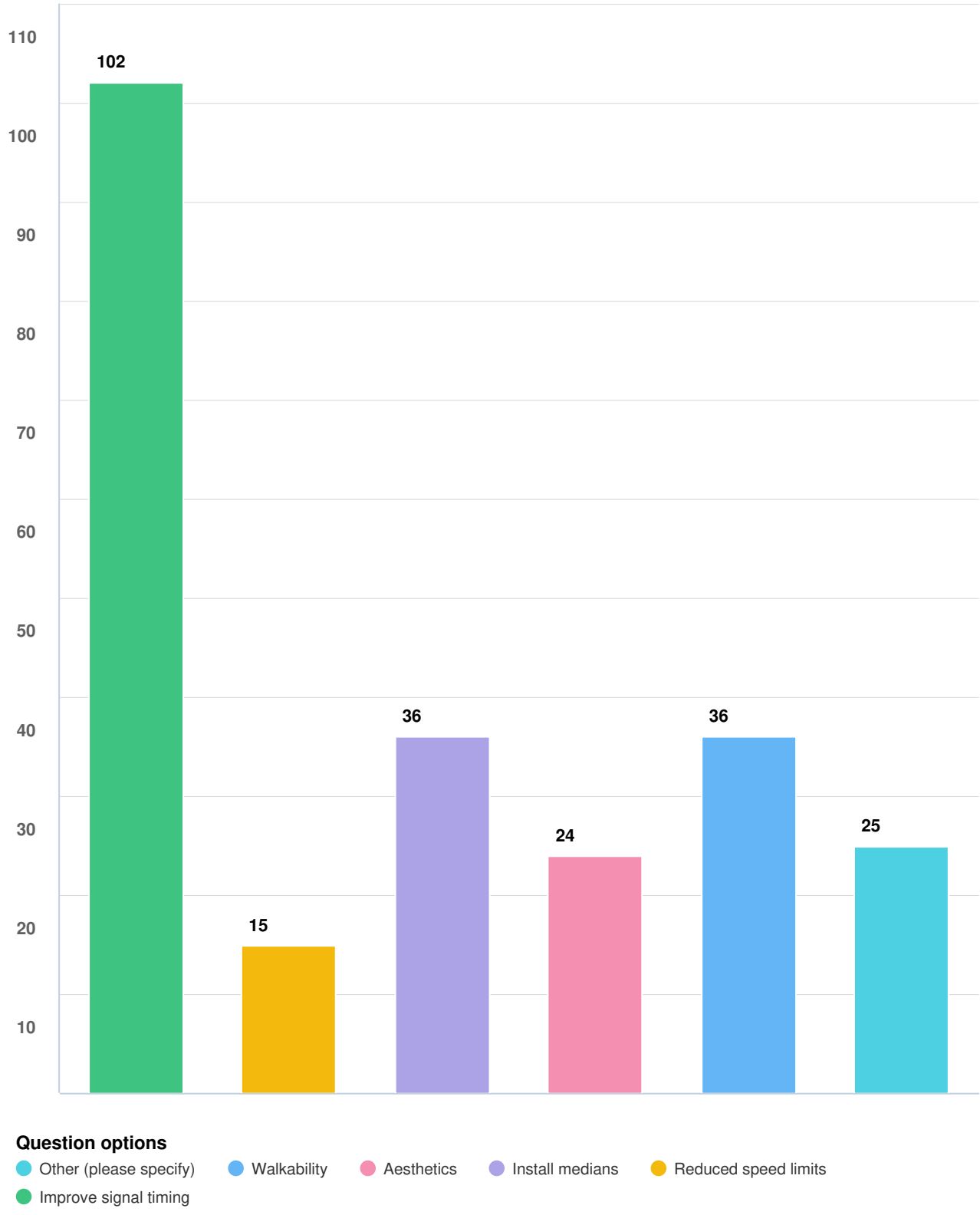
Question options

Very Uncomfortable Some Discomfort No Opinion Comfortable Very Comfortable

Optional question (137 response(s), 1 skipped)

Question type: Dropdown Question

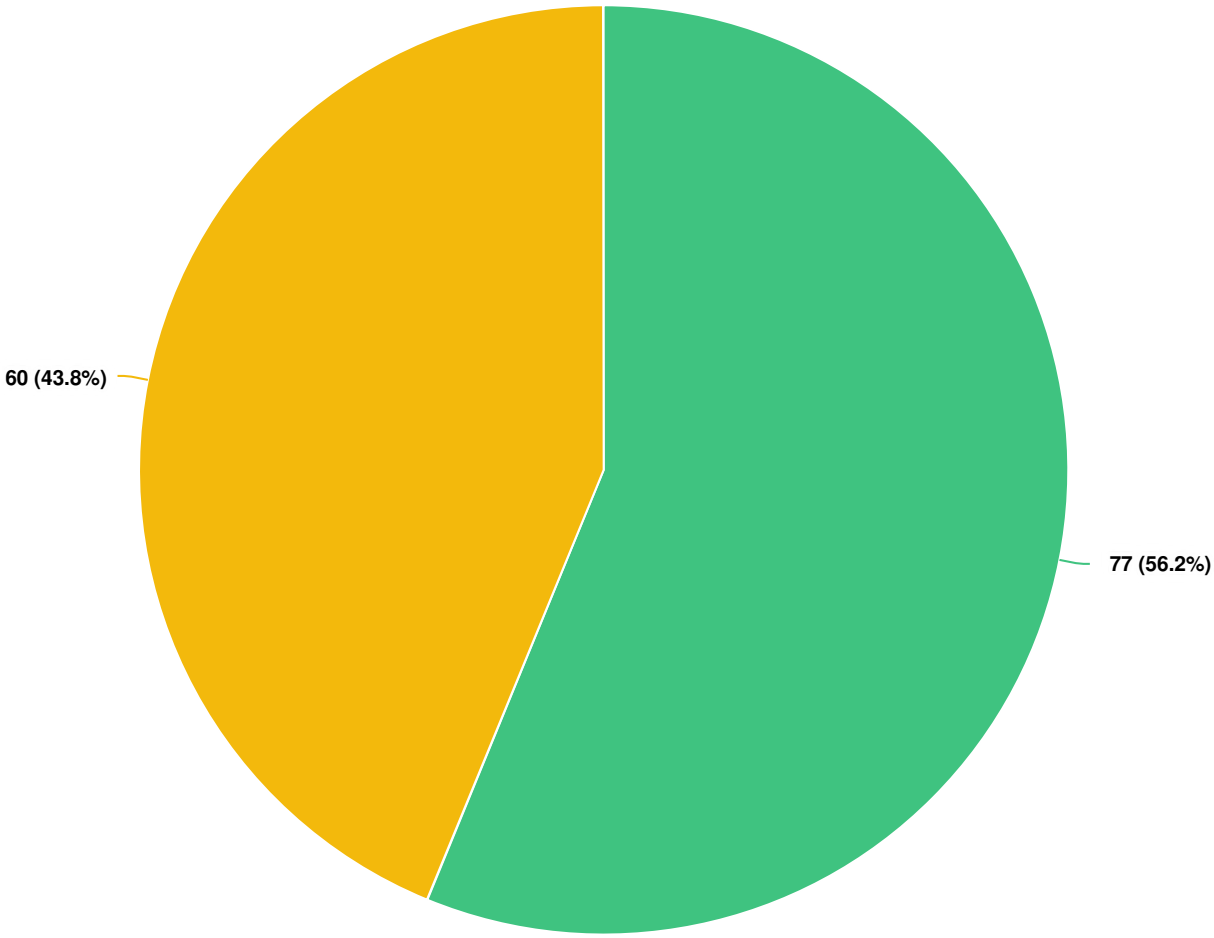
What improvements can be made to improve the corridor? Pick up to three:



Optional question (136 response(s), 2 skipped)

Question type: Checkbox Question

Does the congestion of the corridor impact your usage frequency?



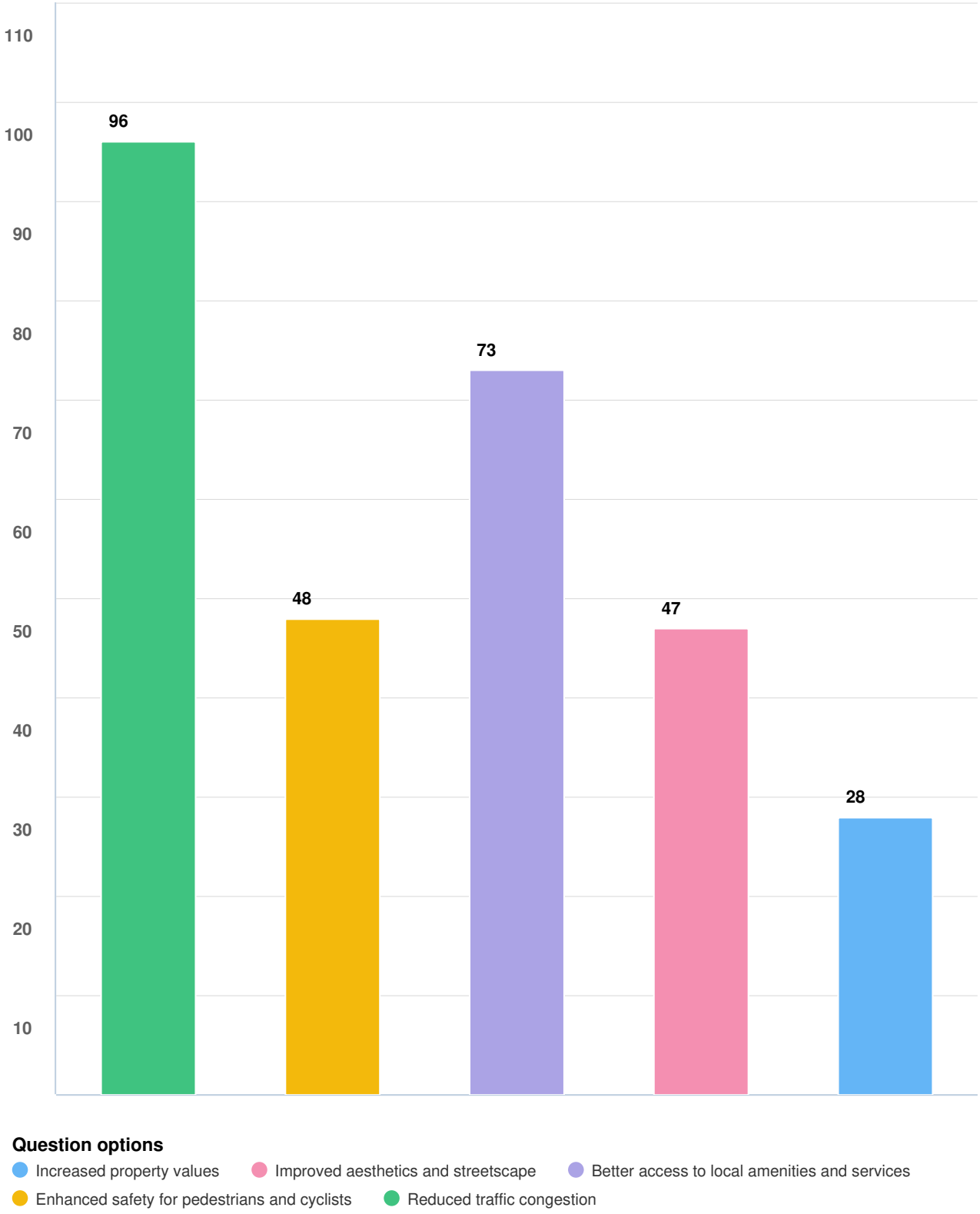
Question options

No Yes

Optional question (137 response(s), 1 skipped)

Question type: Radio Button Question

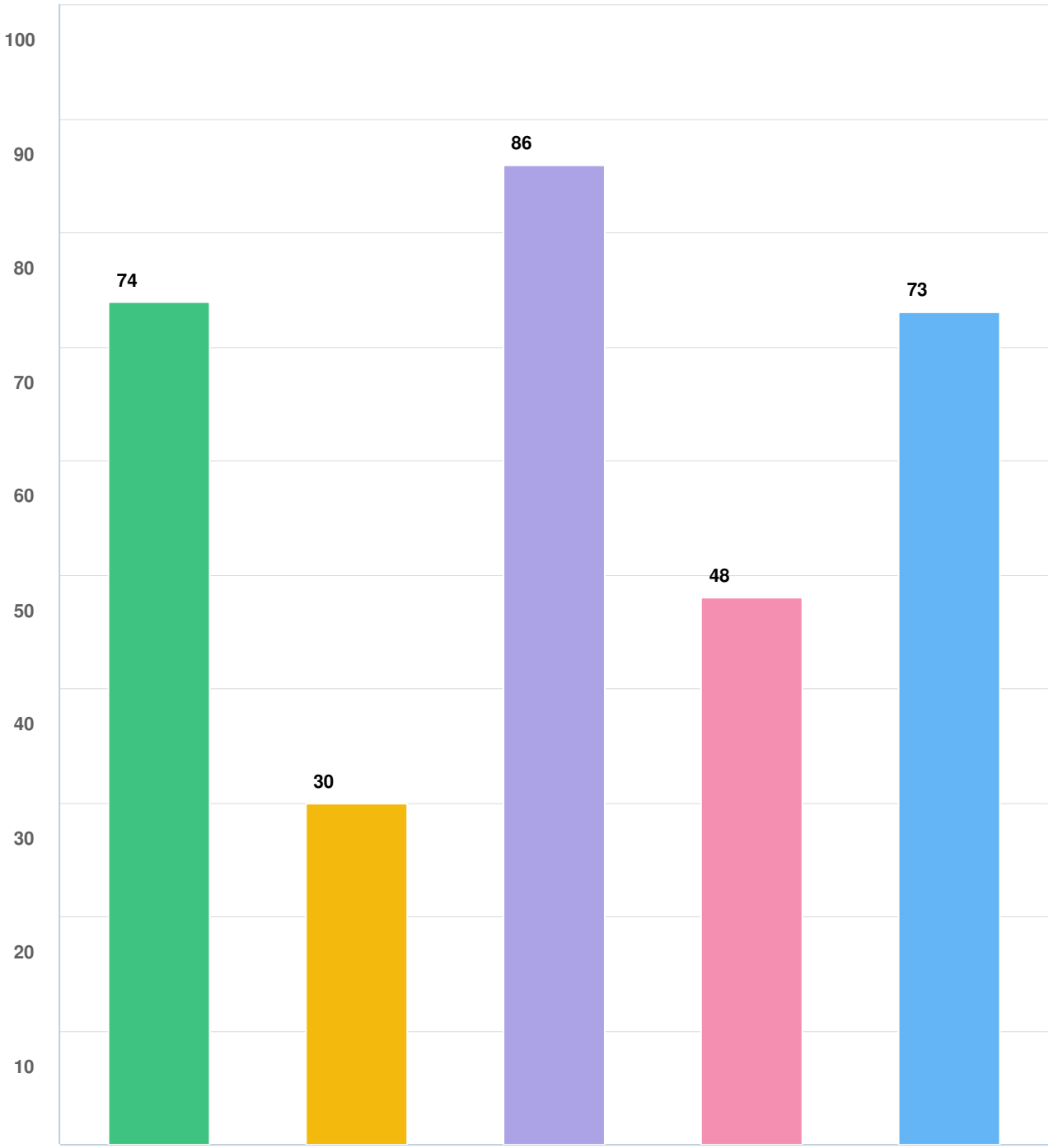
How could improvements to FM 518 (between McLean Rd. and E. Edgewood Dr.) positively impact the community and local businesses? Please select one or more options from each category that you believe are most relevant.



Optional question (131 response(s), 7 skipped)

Question type: Checkbox Question

How could improvements to FM 518 (between McLean Rd. and E. Edgewood Dr.) positively impact your frequency to the corridor? Please select one or more options from each category that you believe are most relevant.



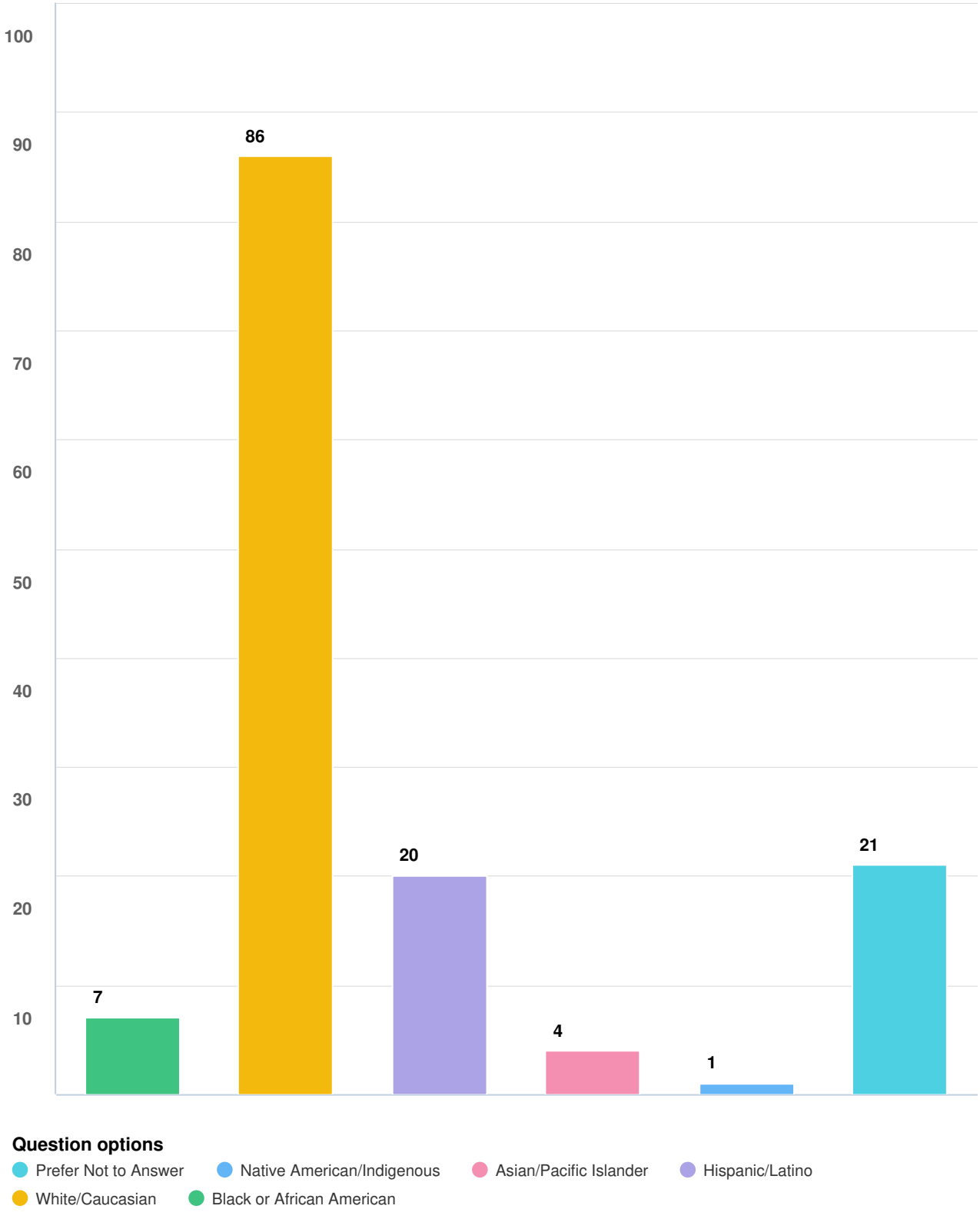
Question options

- Enhanced overall convenience and accessibility
- Greater willingness to explore nearby attractions
- Reduced travel time for commuting or leisure activities
- Increased likelihood of using alternative modes of transportation
- More frequent visits for shopping and dining

Optional question (133 response(s), 5 skipped)

Question type: Checkbox Question

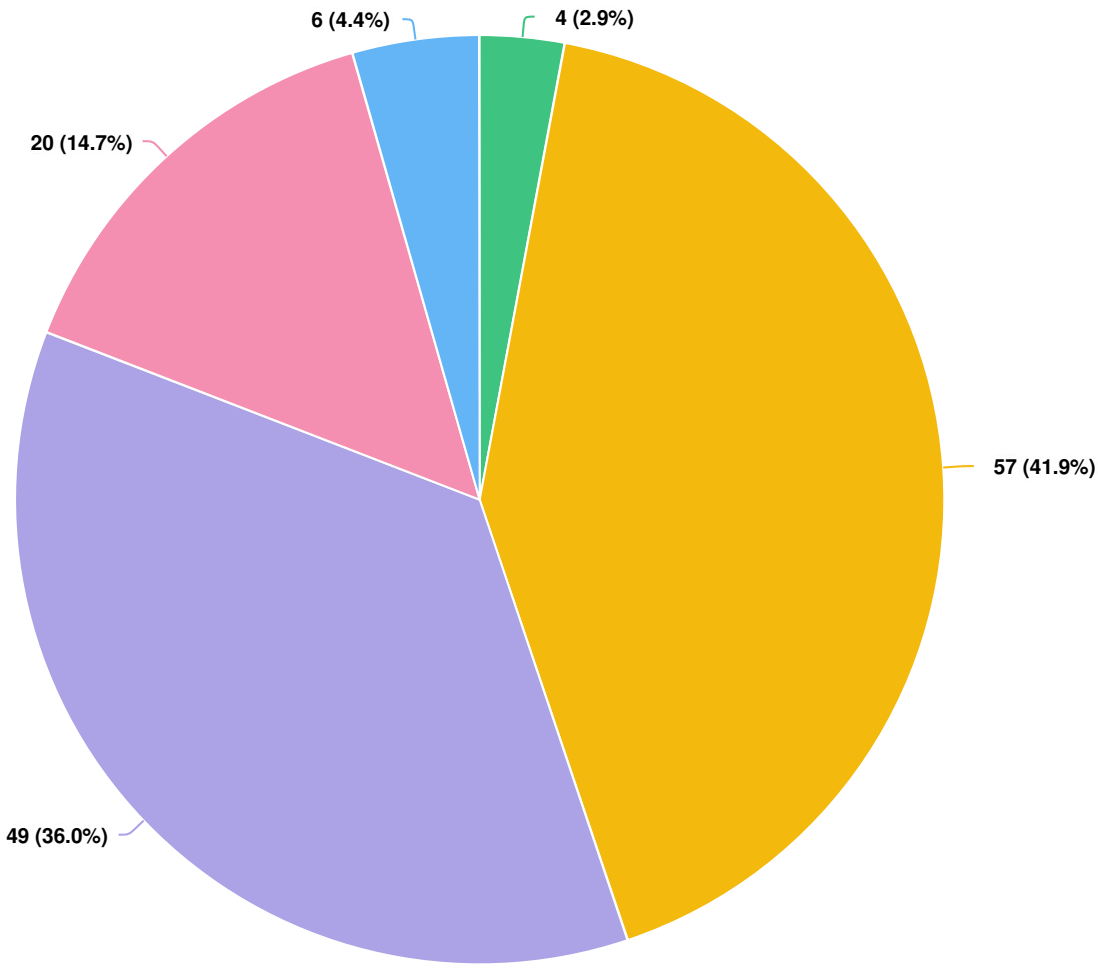
Please Indicate your race and/or ethnicity: (Select all that apply)



Optional question (135 response(s), 3 skipped)

Question type: Checkbox Question

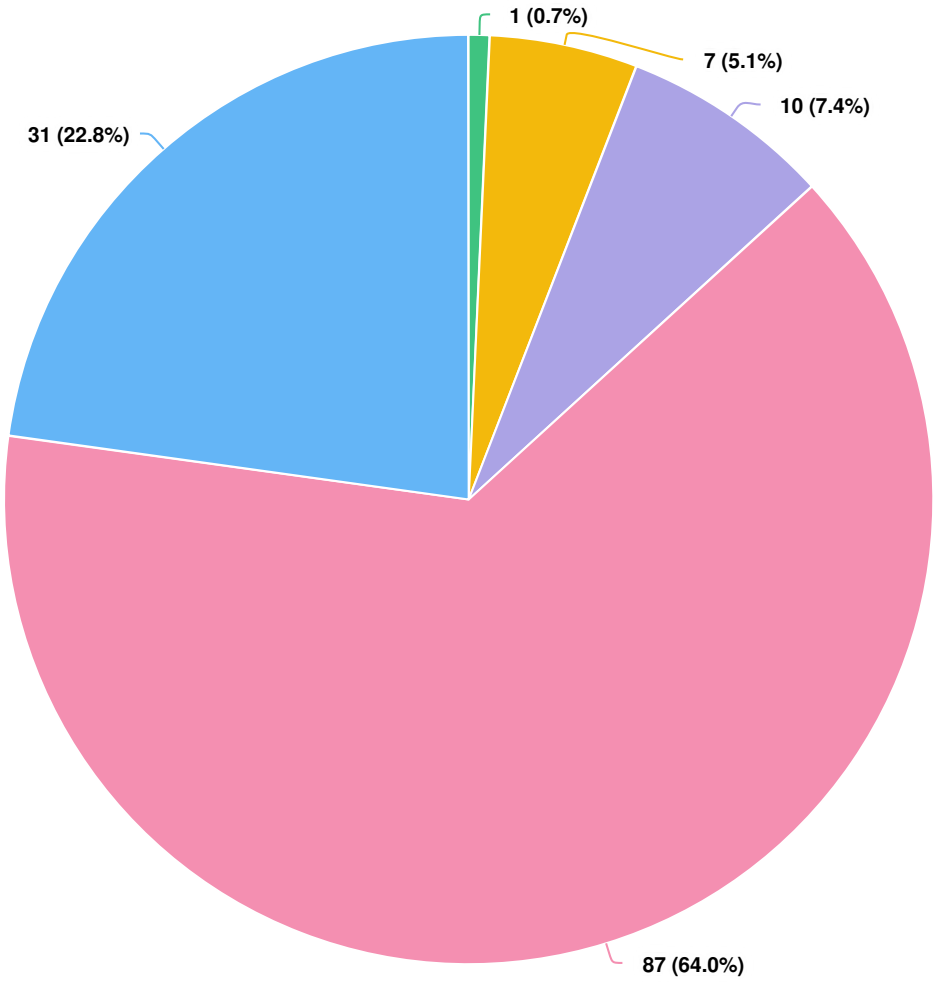
What is your age?



Optional question (136 response(s), 2 skipped)

Question type: Radio Button Question

Please indicate your annual income:



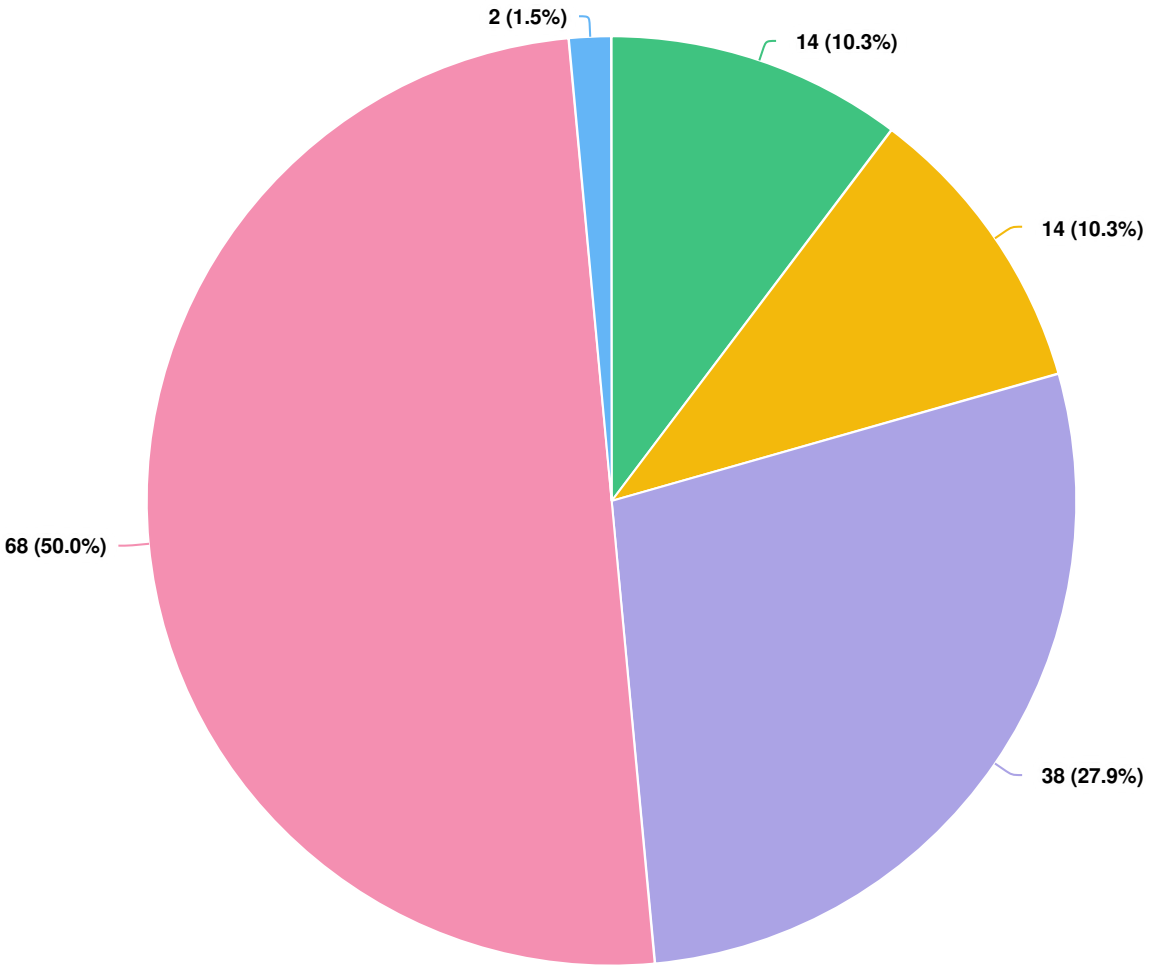
Question options

Prefer Not to Answer | $75,001+ | $50,001 - $75,000 | $25,001 - $50,000 | $25,000 or less

Optional question (136 response(s), 2 skipped)

Question type: Radio Button Question

How long have you lived or worked in Pearland, if applicable? (Select one)



Question options

I don't live/work in Pearland | 20+ years | 11-20 years | 6-10 years | 0-5 years

Optional question (136 response(s), 2 skipped)

Question type: Radio Button Question



2nd Round Public Engagement Feedback

2nd Round of Public Engagement



Events:

- **Old Pearland Farmer's Market (January 18th, 2025)**
  - The Project team had a booth 9am – 1pm
  - Solicited feedback on the proposed recommendations

- **Online Engagement (January 14th – February 14th, 2025)**
  - Mirroring the Farmer's Market, the PDF versions of the boards posted online for feedback

Engagement Feedback



- January 18 – Farmer's Market: 165 visitors (excluding children) stopped by the Project Team's booth.
- Pearland Mobility Project Website Visitors (January-February) -187 visitors.
- Feedback Received – 12 Comments on the proposed recommendations.

Proposed Recommendations Feedback



"The school buses have difficulty making a right turn from Broadway Street onto Sunrise Meadow Dr."



Eight out of the 12 inputs received pertained to sidewalk-related improvements outside of the ones recommended by the Study Team

"Add sidewalk at roundabout from Lakes of Highland Glen to Cockrell Elementary"

"More sidewalks everywhere are needed"



"Fix signal timing at Magnolia & Pearland Pkwy."

"Left turn light at Magnolia and McLean, the left on Magnolia heading south. The light often skips the turn."

"These proposals are awesome! Thank you for these projects to improve the city."

Project Public Engagement Summary

In total, the Pearland Mobility Study held:

- 4 Steering Committee Meetings
- 2 Stakeholders Group Meetings
- 2 Public Meetings
- 2 One-Month Online Engagement

There were...

643
Total Website Visits

175
Outreach Activity Participants







Proposed Short-Term Intersection Improvements

Pearland Mobility Study

Houston-Galveston Area Council

Traffic counts were collected and analyzed for over 60 City intersections in order to develop the recommended improvements. The Proposed Short-term (0-5 years) intersection improvements aim to improve traffic flow and traffic safety at existing intersections.

Location: Orange St at SH 35



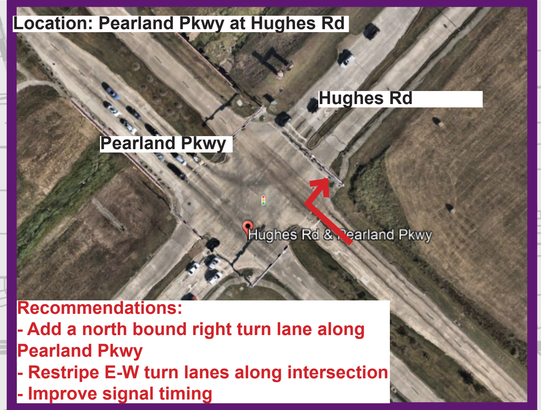
Recommendation: Modify Signal Timing and replace with Flashing Yellow Arrow

Location: McHard Rd at SH 35



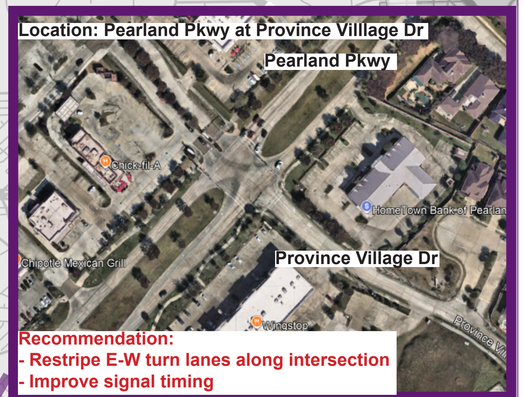
Recommendation:
- Add a East Bound Right Turn Lane on McHard Road
- Add a South Bound Right Turn Lane on SH 35

Location: Pearland Pkwy at Hughes Rd



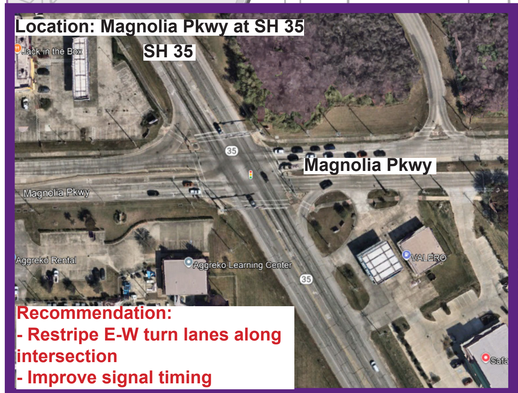
Recommendations:
- Add a north bound right turn lane along Pearland Pkwy
- Restripe E-W turn lanes along intersection
- Improve signal timing

Location: Pearland Pkwy at Province Village Dr



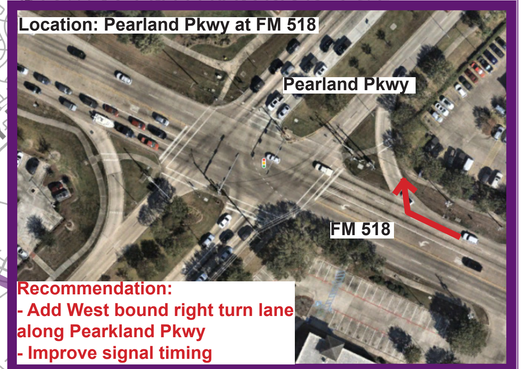
Recommendation:
- Restripe E-W turn lanes along intersection
- Improve signal timing

Location: Magnolia Pkwy at SH 35



Recommendation:
- Restripe E-W turn lanes along intersection
- Improve signal timing

Location: Pearland Pkwy at FM 518



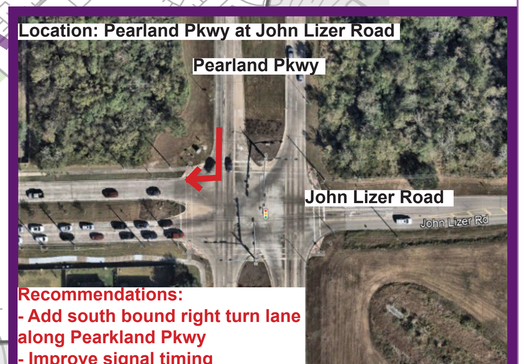
Recommendation:
- Add West bound right turn lane along Pearkland Pkwy
- Improve signal timing

Location: Bailey Road at SH 35



Recommendation:
- Add East Bound Right and West Bound Right turn lanes along Bailey Road
- Add South Bound Right turn lane along SH 35
- Improve signal timing

Location: Pearland Pkwy at John Lizer Road



Recommendations:
- Add south bound right turn lane along Pearkland Pkwy
- Improve signal timing

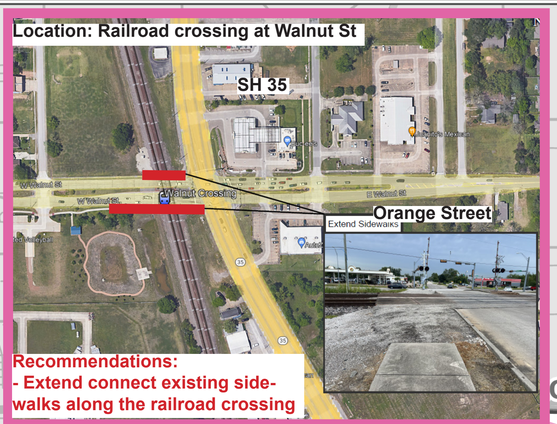
Proposed Medium-Term Intersection Improvements

Pearland Mobility Study

Houston-Galveston Area Council

Traffic counts were collected and analyzed for over 60 City intersections in order to develop the recommended improvements. The Proposed Medium-term (6-10 years) intersection improvements aim to improve traffic flow and traffic safety at existing intersections.

Location: Railroad crossing at Walnut St



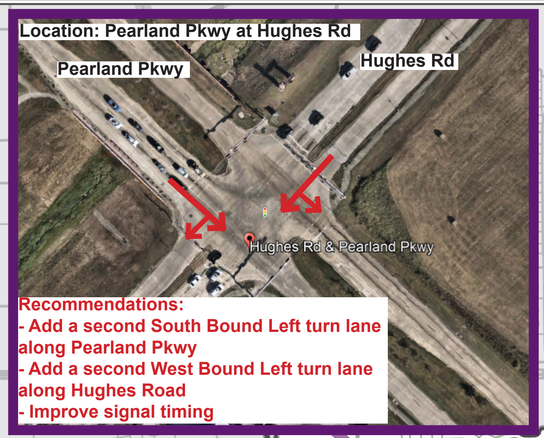
Recommendations:
- Extend connect existing side-walks along the railroad crossing

Location: Orange St at SH 35



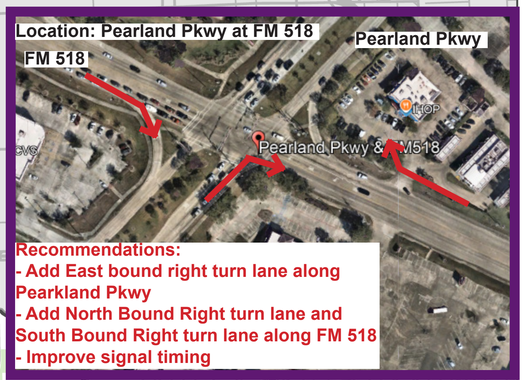
Recommendations:
- Add a West Bound Right Turn Lane on Orange St
- Improve signal timing

Location: Pearland Pkwy at Hughes Rd



Recommendations:
- Add a second South Bound Left turn lane along Pearland Pkwy
- Add a second West Bound Left turn lane along Hughes Road
- Improve signal timing

Location: Pearland Pkwy at FM 518



Recommendations:
- Add East bound right turn lane along Pearkland Pkwy
- Add North Bound Right turn lane and South Bound Right turn lane along FM 518
- Improve signal timing

Location: Bailey Rd at SH 35



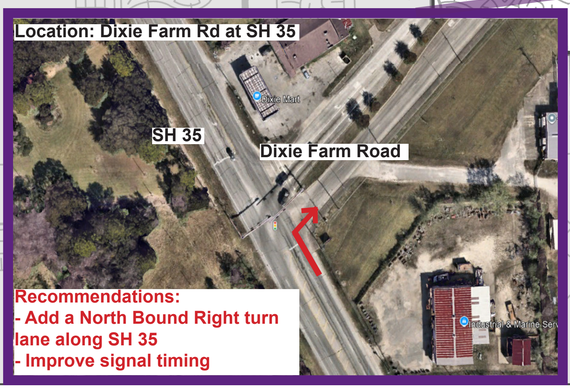
Recommendation:
- Add Second North Bound Left Turn Lane on SH 35
- Improve signal timing

Location: Pearland Pkwy at Dixie Farm Road



Recommendation:
Add West Bound Right turn lane along Dixie Farm Rd

Location: Dixie Farm Rd at SH 35



Recommendations:
- Add a North Bound Right turn lane along SH 35
- Improve signal timing

Location: Hastings Canon Road at SH 35



Recommendations:
- Add East bound right turn lane along Hastings Canon Road
- Improve signal timing

SHADOW CREEK PKWY
MCHARD RD
HUGHES RANCH RD
BROADWAY ST
FITE RD
MAGNOLIA PKWY
SH6
SH288
KINGSLEY DR
KIRBY DR
CULLEN PKWY
STONE RD
O'DAY RD
HATFIELD RD
MANVEL RD
MYKAWA RD
OLD ALVIN RD
MAIN ST
VETERANS DR
LIBERTY DR
DIXIE FARM RD
PEARLAND PKWY
EDGEWOOD DR
FM518
SH35
865

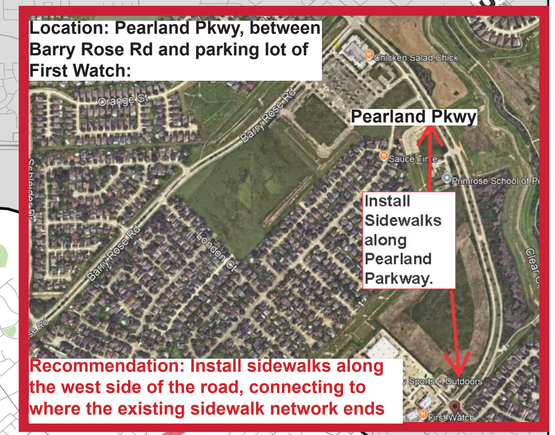
Proposed Pedestrian Infrastructure Improvements

Pearland Mobility Study

Houston-Galveston Area Council

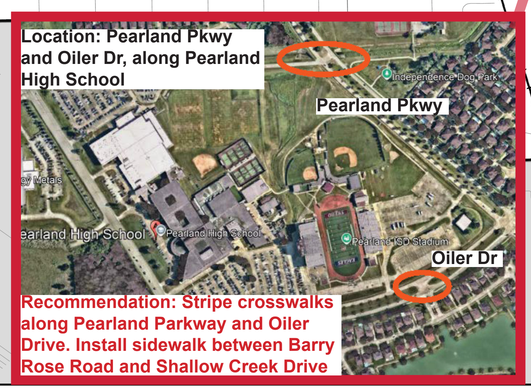
Building off of the Pearland 2021 Multi-modal Master Plan and public engagement feedback received at the beginning of this project, a variety of pedestrian infrastructure improvements are being recommended.













Proposed Safety Improvements at High-Injury Locations

Pearland Mobility Study

In addition to the short-term and medium-term recommendations, a set of safety improvements have been recommended after the project team looked at the conditions of the existing High-Injury network within Pearland. The High-Injury Network examined 7-years of crash data between 2017 - 2023.



Proposed City-Wide Improvements

Pearland Mobility Study

Along with the location specific recommendations, a list of holistic recommendations for Pearland's mobility network is listed below, ranging from system wide technology improvements to long-term mobility planning.



Traffic Technology Improvements

Recommendations to expand the list of equipments at all traffic signals:

- Left-turn Flashing Yellow Arrow Displays
- Radar vehicle detection
- Battery Back-up Units
- Signal Communication (Fiber or Wireless)
- CCTV Cameras
- Accessible Pedestrian Signal (APS) Units
- Emergency Preemption Equipment

Recommendations for traffic systems:

- Leading Pedestrian Interval (LPI)
- Update Central Control System
- Coordinated Signal Timing Plans
- Staff Traffic Management Center
- Advanced Traffic Signal Performance Measures (ATSPMs)
- Arterial Dynamic Message Signs

Emerging Traffic Technology Improvements

Recommendations for long-term technology related improvements:

- ITS Master Plan for the City
- Autonomous & Connected Vehicle (A/CV) Framework
- Regional Transportation Systems Management & Operations (TSMO)



Long-Term Recommendations (11+ Years)

Thoroughfare Plan Updates along with updated travel demand modeling results. In conjunction with the pedestrian infrastructure improvements, it is recommended that John Lizer Road, from Pearland Pkwy to Shady Bend Dr be widened up to 4 lanes.



Americans with Disabilities Act (ADA) Transition Plan

Based on the Americans with Disabilities Act (ADA) – Civil Rights Law: Title II, it is recommended that the City follow the following administrative requirements:

- Completion of a Self-Evaluation
- Development of ADA complaint procedure
- Designation of 1 person to oversee Title II compliance
- Develop ADA Transition Plan to schedule removal of barriers uncovered by 'Self Evaluation' process



Time	Number of visitors at Pearland Farmer's Market – Pearland Mobility Study (1/18/25)
Before 9 am	
9:00 -10:00am 27	
10:00 -11:00am 57	
11:00 -12:00 pm 53	
12:00 -1:00 pm 24	
After 1:00 pm	

City of Pearland
Pearland Mobility Study – Proposed Recommendations
Feedback Form

Name: Kyle Patrick *Email (optional):* _____

Are you a resident of City of Pearland? (Y) *N* *(Circle One)*

Comments on the Pearland Mobility Study's proposed recommendations:
(Please include road names in your comment)

- Trail or runners path around pond / lake at independence park.
- Sidewalk at round about from Lakes of Highland Glen to Cockrell Elementary

Thank you for your feedback!

City of Pearland
Pearland Mobility Study – Proposed Recommendations
Feedback Form

Name: _____ *Email (optional):* _____

Are you a resident of City of Pearland? *Y* *N* *(Circle One)*

Comments on the Pearland Mobility Study's proposed recommendations:
(Please include road names in your comment)

Fix signal timing on Magnolia & Pearland Pkwy

Thank you for your feedback!

City of Pearland
Pearland Mobility Study – Proposed Recommendations
Feedback Form

Name: _____ *Email (optional):* _____

Are you a resident of City of Pearland? *Y* *N* *(Circle One)*

Comments on the Pearland Mobility Study's proposed recommendations:
(Please include road names in your comment)

Veterans Drive sidewalk – should've been done a lot of time ago.

More sidewalks everywhere

- Additional questions about railroad in FM 518

- Left turn light at Magnolia & McLean, Left is on Magnolia goin South. It hits

Thank you for your feedback!

City of Pearland
Pearland Mobility Study – Proposed Recommendations
Feedback Form

Name: _____ *Email (optional):* _____

Are you a resident of City of Pearland? *Y* *N* *(Circle One)*

Comments on the Pearland Mobility Study's proposed recommendations:
(Please include road names in your comment)

Bailey Rd, is a right dead end
Even though the roadway sign is right & left turn.
Along Bailey, there are additional incorrect signs.

Thank you for your feedback!

City of Pearland
Pearland Mobility Study – Proposed Recommendations
Feedback Form

Name: _____ *Email (optional):* _____

Are you a resident of City of Pearland? *Y* *N* *(Circle One)*

Comments on the Pearland Mobility Study's proposed recommendations:
(Please include road names in your comment)

Woodcreek Drive, no sidewalks. Residents mentioned they raised concern to council, parent has a disability & challenges many her.

Thank you for your feedback!

Summary Report

18 March 2021 - 12 February 2025

Engage HGAC

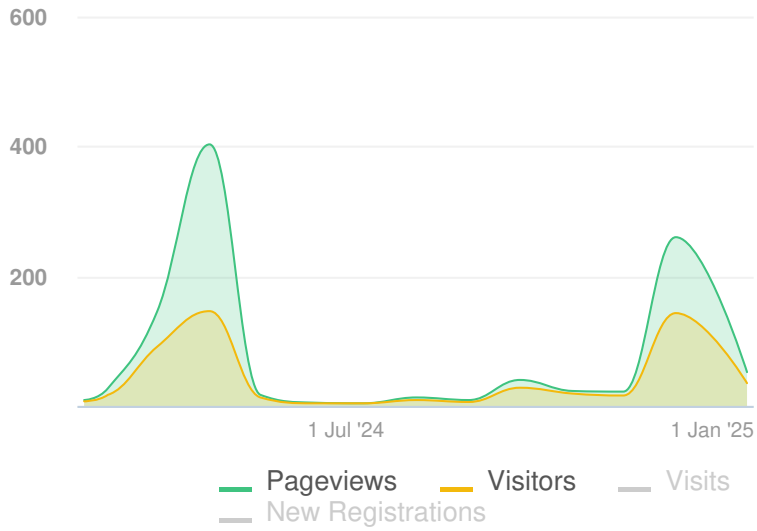
PROJECTS SELECTED: 1

Pearland Mobility Study

FULL LIST AT THE END OF THE REPORT

GRANICUS

Visitors Summary



Highlights

TOTAL VISITS
633

MAX VISITORS PER DAY
54

NEW REGISTRATIONS
1

ENGAGED VISITORS
39

INFORMED VISITORS
95

AWARE VISITORS
402

PARTICIPANT SUMMARY

ENGAGED
INFORMED
AWARE

39 ENGAGED PARTICIPANTS

	Registered	Unverified	Anonymous
Contributed on Forums	0	0	0
Participated in Surveys	0	0	31
Contributed to Newsfeeds	0	0	0
Participated in Quick Polls	0	0	0
Posted on Guestbooks	0	8	0
Contributed to Stories	0	0	0
Asked Questions	0	0	0
Placed Pins on Places	0	0	0
Contributed to Ideas	0	0	0

** A single engaged participant can perform multiple actions*

(%)

Pearland Mobility Study	39 (9.7%)

** Calculated as a percentage of total visits to the Project*

ENGAGED
INFORMED
AWARE

95 INFORMED PARTICIPANTS

	Participants
Viewed a video	0
Viewed a photo	0
Downloaded a document	0
Visited the Key Dates page	31
Visited an FAQ list Page	0
Visited Instagram Page	0
Visited Multiple Project Pages	49
Contributed to a tool (engaged)	39

** A single informed participant can perform multiple actions*

(%)

Pearland Mobility Study	95 (23.6%)

** Calculated as a percentage of total visits to the Project*

ENGAGED
INFORMED
AWARE

402 AWARE PARTICIPANTS

	Participants
Visited at least one Page	402

** Aware user could have also performed an Informed or Engaged Action*

Pearland Mobility Study	402

** Total list of unique visitors to the project*

ENGAGEMENT TOOLS SUMMARY

0	1	2	0	1	0	0	0	0
FORUM TOPICS	SURVEYS	NEWS FEEDS	QUICK POLLS	GUESTBOOKS	STORIES	Q&A'S	PLACES	

SURVEYS SUMMARY

1	Surveys
31	Contributors
72	Submissions

TOP 3 SURVEYS BASED ON CONTRIBUTORS

31
Contributors to

We want your feedback for the FM 518 (McLean Rd. to E. Edgewood Dr.) Corridor Study

NEWSFEEDS SUMMARY

2	NewsFeed
1	Visits
1	Visitors

TOP 3 NEWSFEEDS BASED ON VISITORS

1
Visitors to

Budget Prioritization Activity

0
Visitors to

Proposed Recommendations

GUEST BOOKS SUMMARY

1	Guest Books
8	Contributors
12	Entries

TOP 3 GUEST BOOKS BASED ON CONTRIBUTORS

8
Contributors to

Pearland Mobility Study

INFORMATION WIDGET SUMMARY

0	0	0	0	1
DOCUMENTS	PHOTOS	VIDEOS	FAQS	KEY DATES

KEY DATES

1	Key Dates
31	Visitors
32	Views

TOP 3 KEY DATES BASED ON VIEWS

32
Views

Pearland Mobility Study

TRAFFIC SOURCES OVERVIEW

REFERRER URL	Visits
www.google.com	127
m.facebook.com	29
lm.facebook.com	12
www.bing.com	7
www.linkedin.com	7
android-app	5
www.h-gac.com	5
l.facebook.com	4
bing.com	3
nextdoor.com	1
statics.teams.cdn.office.net	1
www.houstonarchitecture.com	1

SELECTED PROJECTS - FULL LIST

PROJECT TITLE	AWARE	INFORMED	ENGAGED
Pearland Mobility Study	402	95	39

Report generated at: 2025-04-14 12:31:41 by Jenny.Lai
Project: Pearland Mobility Study
GuestBook: Proposed Recommendations [2021-03-18 to 2025-04-13]

No.	Contribution
1	Add sidewalks on Broadway after Dixie farm road. I live in Riverwalk neighborhood, on the border of friendswood. Our area is not all walkable. We don't have a sidewalk that even extends to our neighborhood entrance.
2	Sidewalks needed from green tee/country club intersection down to independence park. There is not one solid line of sidewalks from the green tee/country club stop sign down to the park.
3	These proposals are awesome! Thank you for these projects to improve the city.
4	More sidewalks and safe places to cross the street added around Fite and Manvel roads would be nice. I’m tired of almost getting run over while walking in the bike lane.
5	Expand a Trail or runners path around pond/lake at Independence Park
6	Add sidewalk at roundabout from Lakes of Highland Glen to Cockrell Elementary
7	Fix signal timing at Magnolia & Pearland Pkwy.
8	The Veterans Drive proposed sidewalks segment should have been fixed a long time ago.
9	More sidewalks everywhere are needed
10	Left turn light at Magnolia and McLean, the left on Magnolia heading south. The light often skips the turn.
11	Bailey Rd, two intersections east of Cullen Pkwy, is a dead right end. The roadway turn signs are inaccurate and show right and left turns. Other roadway turn signs are inaccurate along Bailey Rd.
12	Woodcreek Drive, no sidewalks. We have brought this to City Council's concern prior.
	The school buses have difficulty making a right turn from Broadway Street onto Sunrise Meadow Dr.

END OF REPORT

Author	Posted at
Joel	14 Jan 2025, 01:18 PM
Davis	18 Jan 2025, 08:49 AM
Lucero	18 Jan 2025, 10:57 AM
Romeo	18 Jan 2025, 07:28 PM
Kyle P.	20 Jan 2025, 09:41 AM
Kyle P.	20 Jan 2025, 09:42 AM
Kyle P.	20 Jan 2025, 09:44 AM
Kyle P.	20 Jan 2025, 09:45 AM
Kyle P.	20 Jan 2025, 09:46 AM
Kyle P.	20 Jan 2025, 09:48 AM
anonymous	20 Jan 2025, 10:32 AM
Alfred	12 Feb 2025, 03:58 PM

Appendix C: Intersection Improvements

Table of Contents

Synchro Network Memo **1**

Memorandum

DATE: **July 30, 2025**

RE: **Pearland Mobility Study - Existing Conditions, Sh**
Improvements LOS Summary

The following is a summary of the existing conditions analysis and short term improvement recommendations for the study intersections.

Existing Conditions and Level-of-Service

As part of the City of Pearland Mobility Study, an existing Synchro model was developed for 60 signalized intersections along 7 corridors within the Pearland city limits. The existing conditions modeling effort also included 5 isolated intersections. The modeling of these 60 intersections is to evaluate the existing operation level-of-service (LOS) at each intersection.
Data collection efforts included the following:

- Any available turning movement count data
- Collection of 24-hour turning movement counts
- As-built drawings
- Signal timing plans
- Actual traffic signal operation (protected left turn, protected permissive, or permissive)
- Left turn lane storage and return lengths

An existing Synchro model was built for the following corridors and 5 isolated intersections:

- SH 35 from Flea Market to Hastings Cannon
- Pearland Parkway from Forest Park to Dixie Farm
- Bailey from Smith Ranch to Pearland Sites
- McHard from Mykawa to SH 288
- Veterans from Magnolia to Walnut
- Hughes Ranch from SH 288 to Reid
- Kirby at N Spectrum
- Kirby at S Spectrum
- McHard at Old Alvin
- Orange at Mykawa
- Bass Pro at SH 288 SB Frontage Road

Intersections included in each corridor include the following:

SH 35

- SH 35 at Flea Market
- SH 35 at Knapp
- SH 35 at McHard
- SH 35 at PISD
- SH 35 at Orange
- SH 35 at Manolia
- SH 35 at High School
- SH 35 at Bailey
- SH 35 at Dixie Farm
- SH 35 at Hastings Cannon

Pearland Parkway

- Pearland Parkway at Forest Park
- Pearland Parkway at Hughes Road
- Pearland Parkway at Shallow Creek
- Pearland Parkway at Province Village
- Pearland Parkway at FM 518
- Pearland Parkway at John Lizer
- Pearland Parkway at Oiler
- Pearland Parkway at Dixie Farm

Bailey

- Bailey at Smith Ranch
- Bailey at CR 90
- Bailey at Cullen
- Bailey at Manvel
- Bailey at Harkey
- Bailey at McLean
- Bailey at Pearland Sites

McHard

- McHard at Mykawa
- McHard at Hatfield
- McHard at Oday
- McHard at Garden
- McHard at Roy
- McHard at Max
- McHard at Cullen
- McHard EB at Country Place Blvd NB
- McHard WB at Country Place Blvd NB
- McHard WB at Country Place Blvd SB
- McHard EB at Country Place Blvd SB

- McHard at Country Place Parkway
- McHard at SH 288 NB
- McHard at SH 288 SB

Veterans

- Veterans at CR 100
- Veterans at Hastings Cannon
- Veterans at Walnut

Hughes Ranch

- Hughes Ranch at SH 288
- Hughes Ranch at County Place
- Hughes Ranch at Miller Ranch
- Hughes Ranch at Bryan
- Hughes Ranch at Cullen
- Hughes Ranch at Reid

Intersection configurations were built in Synchro for existing conditions for each intersection in the corridors as well as the isolated intersections. Total intersection configurations included the number of thru-lanes, number of left turn lanes, any exclusive right turn lanes for all approaches and departures. Turn lane storage and return lengths collected were included in the configuration build-out of each intersection.

Existing traffic signal timing plans were input into Synchro for each intersection.
Existing traffic signal counts were imported into Synchro for both the AM and PM peak hours.
At the time of this summary 12 intersections were missing traffic signal timing sheets. These intersections were analyzed by optimizing the signal timing.

Based upon the existing signal timing and signal optimization, at total of 10 intersections operate at a LOS E or F during the AM peak hour and a total of 15 intersections that operate at a LOS E or F during the PM peak hour.

The results of existing Synchro model run are shown in **Table 1** and **Figures 1 and 2**.
Existing intersection attributes were identified and include the following:

1. Flashing yellow arrows for left turns (protected/permissive);
2. Battery Back Up (BBU) system;
3. Pan Tilt Zoom (PTZ) camera;
4. Split Phase signal operation.

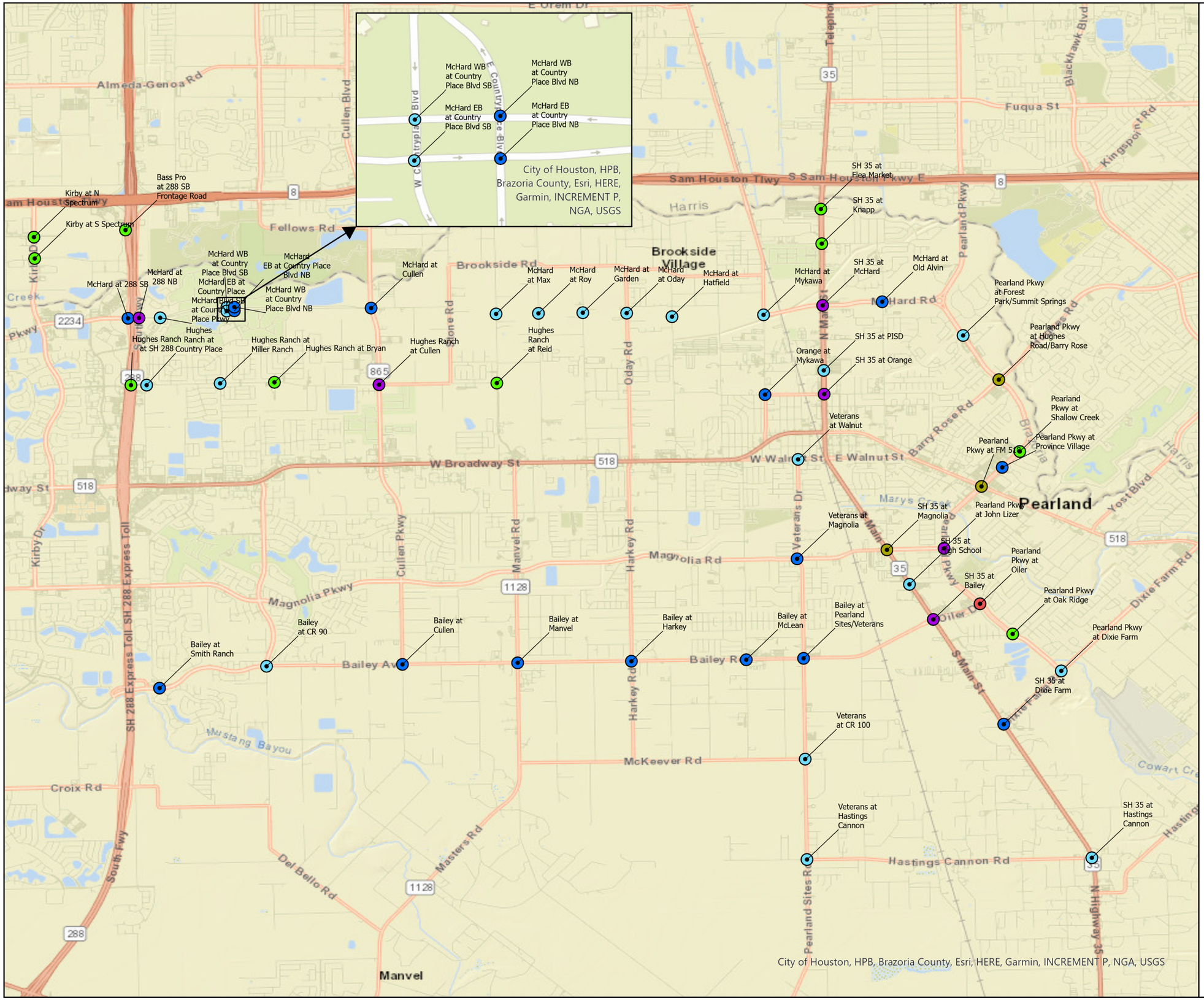
Table 2 provides a summary of the study intersections and what currently exists at each study intersection.

Table 1. 2024 Existing LOS

Street_number	Intersection	Longitude	Latitude	2024 AM Exisiting LOS	2024 AM Exisiting ICU LOS	2024 PM Exisiting LOS	2024 PM Exisiting ICU LOS
1	SH 35 at Flea Market	-95.28664922	29.59601185	A	A	A	A
2	SH 35 at Knapp	-95.28651995	29.59100428	A	A	A	A
3	SH 35 at McHard	-95.28638957	29.58206418	D	D	E	E
4	SH 35 at PISD	-95.28622798	29.57264899	B	A	C	B
5	SH 35 at Orange	-95.28617507	29.56921256	D	C	D	B
8	SH 35 at Magnolia	-95.27707755	29.54667284	E	D	F	E
9	SH 35 at High School	-95.27375478	29.54167512	B	B	A	A
10	SH 35 at Bailey	-95.27030828	29.53659172	D	C	F	E
11	SH 35 at Dixie Farm	-95.2601248	29.52141855	C	D	C	D
12	SH 35 at Hastings Cannon	-95.24737961	29.5020822	B	B	B	C
13	Pearland Pkwy at Forest Park/Summit Springs	-95.2659975	29.57770974	B	C	B	C
14	Pearland Pkwy at Hughes Road/Barry Rose	-95.26083394	29.57131701	E	E	E	E
15	Pearland Pkwy at Shallow Creek	-95.25780644	29.56090919	A	A	B	B
16	Pearland Pkwy at Province Village	-95.26034219	29.55860963	C	A	E	C
17	Pearland Pkwy at FM 518	-95.26334185	29.5558512	E	D	E	D
18	Pearland Pkwy at John Lizer	-95.26875418	29.54688926	D	C	F	D
19	Pearland Pkwy at Oiler	-95.26355252	29.53886103	F	E	F	F
20	Pearland Pkwy at Dixie Farm	-95.25180452	29.52913789	B	B	C	C
21	Bailey at Smith Ranch	-95.38244037	29.5266439	C	A	C	A
22	Bailey at CR 90	-95.36695034	29.52981416	B	A	B	A
23	Bailey at Cullen	-95.34728119	29.5300833	C	A	C	A
24	Bailey at Manvel	-95.33053732	29.53030981	C	C	C	C
25	Bailey at Harkey	-95.31407086	29.53054226	C	A	C	A
26	Bailey at McLean	-95.29744505	29.53075633	C	A	C	A
27	Bailey at Pearland Sites/Veterans	-95.28914967	29.53095926	C	B	D	C
28	McHard at Old Alvin	-95.27776955	29.5825922	C	B	C	B
29	Orange at Mykawa	-95.29472875	29.5691426	C	A	B	A
30	McHard at Mykawa	-95.29494558	29.5806987	B	C	B	C
31	McHard at Hatfield	-95.30819118	29.58043253	B	A	B	A

Table 1. 2024 Existing LOS

Street_number	Intersection	Longitude	Latitude	2024 AM Exisiting LOS	2024 AM Exisiting ICU LOS	2024 PM Exisiting LOS	2024 PM Exisiting ICU LOS
32	McHard at Oday	-95.3147564	29.58094578	B	A	B	A
33	McHard at Garden	-95.32110512	29.58100804	B	A	B	A
34	McHard at Roy	-95.32752897	29.58091295	B	A	B	A
35	McHard at Max	-95.33365928	29.58082747	B	A	B	A
36	McHard at Cullen	-95.35181597	29.58167768	C	C	E	E
37	McHard EB at Country Place Blvd NB	-95.37161409	29.58128034	C	B	B	C
38	McHard WB at Country Place Blvd NB	-95.37161764	29.58181798	C	A	B	A
39	McHard WB at Country Place Blvd SB	-95.37269948	29.58177158	B	A	B	A
40	McHard EB at Country Place Blvd SB	-95.3727068	29.58125422	B	A	B	A
41	McHard at Country Place Pkwy	-95.38234942	29.58026973	B	B	B	A
42	McHard at 288 NB	-95.38541882	29.580242	D	B	C	E
43	McHard at 288 SB	-95.38700883	29.5801976	C	B	D	E
44	Veterans at Magnolia	-95.29008668	29.5453751	C	C	C	C
45	Veterans at CR 100	-95.28891639	29.51636658	B	A	B	A
46	Veterans at Hastings Cannon	-95.28865525	29.50183176	B	A	B	A
47	Veterans at Walnut	-95.28994649	29.55976634	B	A	C	B
48	Kirby at N Spectrum	-95.40062298	29.59195233	A	A	A	A
49	Kirby at S Spectrum	-95.400514	29.58885461	A	A	A	A
50	Hughes Ranch at SH 288	-95.38657662	29.5705166	A	A	C	A
51	Hughes Ranch at Country Place	-95.38430971	29.57051989	B	A	D	A
52	Hughes Ranch at Miller Ranch	-95.37367111	29.57077793	B	A	B	A
53	Hughes Ranch at Bryan	-95.36580944	29.57093098	A	A	A	A
54	Hughes Ranch at Cullen	-95.35067422	29.57057622	D	D	F	F
55	Hughes Ranch at Reid	-95.33354824	29.57081773	A	A	A	A
56	Pearland Pkwy at Oak Ridge	-95.25882915	29.53449186	A	A	A	A
58	Bass Pro at 288 SB Frontage Road	-95.38736944	29.59297778	A	A	A	A



Legend

2024 AM Peak Hour LOS

- A
- B
- C
- D
- E
- F

(Accident locations labeled with Object ID)

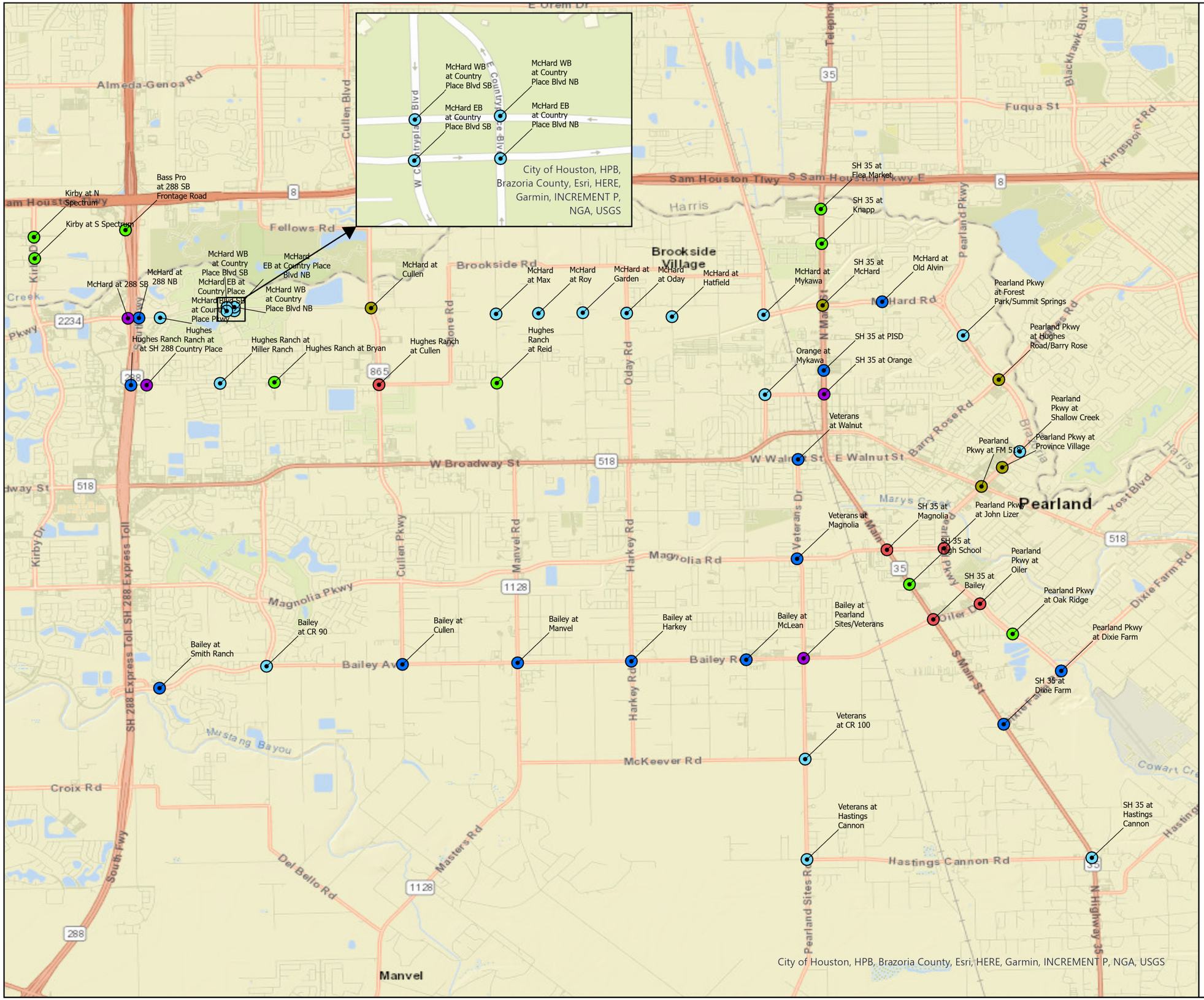
GRADIENT
TRE FIRM f-5291
3151 BRIARPARK DRIVE, SUITE 225
HOUSTON, TX 77042
832.779.5700

City of Pearland
Mobility Study 2024

0 3,000 6,000 Feet

2024 AM PEAK HOUR LOS

8/30/2024



Legend

2024 PM Peak Hour LOS

- A
- B
- C
- D
- E
- F

(Accident locations labeled with Object ID)

GRADIENT
TRE FIRM f-5291
3151 BRIARPARK DRIVE, SUITE 225
HOUSTON, TX 77042
832.779.5700

City of Pearland
Mobility Study 2024

0 3,000 6,000 Feet

2024 PM PEAK HOUR LOS

8/30/2024

Table 2. Existing Intersection Attributes

					Flashing Yellow Arrow					PTZ	Split
S. No	Corridor	Cross Street	Longitude	Latitude	EB	WB	NB	SB	BBU	Camera	Phase
1	SH 35	Flea Market	-95.28664922	29.59601185	N	N	N	N	Y	Y	Y
2	SH 35	Knapp	-95.28651995	29.59100428	N	N	N	N	Y	Y	N
3	SH 35	McHard	-95.28638957	29.58206418	N	N	N	N	Y	Y	N
4	SH 35	PISD	-95.28622798	29.57264899	N	N	Y	Y	Y	Y	Y
5	SH 35	Orange	-95.28617507	29.56921256	N	N	N	N	Y	Y	Y
8	SH 35	Magnolia	-95.27707755	29.54667284	N	N	N	N	Y	Y	Y
9	SH 35	High School	-95.27375478	29.54167512	N	N	Y	Y	Y	N	Y
10	SH 35	Bailey	-95.27030828	29.53659172	N	N	N	N	Y	Y	Y
11	SH 35	Dixie Farm	-95.2601248	29.52141855	N	N	N	N	N	N	NA
12	SH 35	Hastings Cannon	-95.24737961	29.5020822	N	N	N	N	N	N	NA
13	Pearland Pkwy	Forest Park/Summit Springs	-95.2659975	29.57770974	Y	Y	Y	Y	Y	Y	Y
14	Pearland Pkwy	Hughes Road/Barry Rose	-95.26083394	29.57131701	N	N	N	N	Y	N*	Y
15	Pearland Pkwy	Shallow Creek	-95.25780644	29.56090919	N	N	Y	Y	Y	N	Y
16	Pearland Pkwy	Province Village	-95.26034219	29.55860963	N	N	Y	Y	Y	Y	N
17	Pearland Pkwy	FM 518	-95.26334185	29.5558512	N	N	N	N	Y	Y	N
18	Pearland Pkwy	John Lizer	-95.26875418	29.54688926	N	N	N	N	Y	Y	N
19	Pearland Pkwy	Oiler	-95.26355252	29.53886103	N	Y	Y	Y	Y	N	N
20	Pearland Pkwy	Dixie Farm	-95.25180452	29.52913789	Y	N	N	N	N	N	NA
21	Bailey	Smith Ranch	-95.38244037	29.5266439	Y	Y	Y	Y	N	N	N
22	Bailey	CR 90	-95.36695034	29.52981416	Y	Y	Y	Y	Y	N	N
23	Bailey	Cullen	-95.34728119	29.5300833	Y	Y	Y	Y	Y	N	N
24	Bailey	Manvel	-95.33053732	29.53030981	Y	Y	Y	Y	Y	Y	N
25	Bailey	Harkey	-95.31407086	29.53054226	Y	Y	Y	Y	Y	Y	N
26	Bailey	McLean	-95.29744505	29.53075633	Y	Y	Y	Y	Y	Y	N
27	Bailey	Pearland Sites/Veterans	-95.28914967	29.53095926	Y	Y	Y	Y	Y	Y	N
28	McHard	Old Alvin	-95.27776955	29.5825922	Y	Y	Y	Y	Y	Y	N
29	Orange	Mykawa	-95.29472875	29.5691426	N	N	N	N	N	N	N
30	McHard	Mykawa	-95.29494558	29.5806987	Y	Y	Y	Y	Y	Y	N
31	McHard	Hatfield	-95.30819118	29.58043253	Y	Y	Y	Y	Y	Y	N

* - Camera is missing

** - Multi-Way stop

*** - Unsignalized

Table 2. Existing Intersection Attributes

					Flashing Yellow Arrow					PTZ	Split
S. No	Corridor	Cross Street	Longitude	Latitude	EB	WB	NB	SB	BBU	Camera	Phase
32	McHard	Oday	-95.3147564	29.58094578	Y	Y	Y	Y	Y	Y	N
33	McHard	Garden	-95.32110512	29.58100804	Y	Y	Y	Y	Y	Y	N
34	McHard	Roy	-95.32752897	29.58091295	Y	Y	Y	Y	Y	Y	N
35	McHard	Max	-95.33365928	29.58082747	Y	Y	Y	Y	Y	Y	N
36	McHard	Cullen	-95.35181597	29.58167768	Y	Y	Y	Y	Y	Y	N
37	McHard EB	Country Place Blvd NB	-95.37161409	29.58128034	N	N	N	N	Y	Y	Y
38	McHard WB	Country Place Blvd NB	-95.37161764	29.58181798	N	N	N	N	Y	Y	Y
39	McHard WB	Country Place Blvd SB	-95.37269948	29.58177158	N	N	N	N	Y	Y	Y
40	McHard EB	Country Place Blvd SB	-95.3727068	29.58125422	N	N	N	N	Y	Y	Y
41	McHard	Country Place Pkwy	-95.38234942	29.58026973	NA	Y	NA	NA	N	N	NA
42	McHard	288 NB	-95.38541882	29.580242	N	N	N	N	Y	Y	Y
43	McHard	288 SB	-95.38700883	29.5801976	N	N	N	N	Y	Y	Y
44	Veterans	Magnolia	-95.29008668	29.5453751	Y	Y	Y	Y	Y	N	N
45	Veterans **	CR 100	-95.28891639	29.51636658	NA	NA	NA	NA	NA	NA	NA
46	Veterans **	Hastings Cannon	-95.28865525	29.50183176	NA	NA	NA	NA	NA	NA	NA
47	Veterans **	Walnut	-95.28994649	29.55976634	NA	NA	NA	NA	NA	NA	NA
48	Kirby	N Spectrum	-95.40062298	29.59195233	Y	Y	Y	Y	N	Y	N
49	Kirby	S Spectrum	-95.400514	29.58885461	N	N	Y	Y	N	Y	NA
50	Hughes Ranch **	SH 288	-95.38657662	29.5705166	NA	NA	NA	NA	NA	NA	NA
51	Hughes Ranch	Country Place	-95.38430971	29.57051989	N	N	Y	Y	Y	N	N
52	Hughes Ranch	Miller Ranch	-95.37367111	29.57077793	NA	Y	NA	NA	Y	Y	NA
53	Hughes Ranch	Bryan	-95.36580944	29.57093098	NA	Y	NA	NA	Y	Y	NA
54	Hughes Ranch	Cullen	-95.35067422	29.57057622	N	N	N	N	Y	N	N
55	Hughes Ranch	Reid	-95.33354824	29.57081773	N	N	Y	N	Y	N	NA
56	Pearland Pkwy **	Oak Ridge	-95.25882915	29.53449186	NA	NA	NA	NA	NA	NA	NA
58	Bass Pro ***	288 SB Frontage Road	-95.38736944	29.59297778	NA	NA	NA	NA	NA	NA	NA

* - Camera is missing

** - Multi-Way stop

*** - Unsignalized

Existing Conditions Short Term Improvements and LOS

Based upon the existing LOS analysis, eight of the study intersections were found to operate at a LOS E or F during either the AM peak hour, PM peak hour, or both peak hours. The intersections found to be operating poorly include the following intersections:

1. SH 35 at Magnolia Parkway;
2. SH 35 at Bailey Road;
3. Barry Rose Road/Hughes Road at Pearland Parkway;
4. Pearland Parkway at Province Village;
5. Pearland Parkway at FM 518;
6. Pearland Parkway at John Lizer Road;
7. Oiler Drive at Pearland Parkway;
8. Cullen Boulevard at Hughes Ranch Road.

Short term improvements include:

1. Lane configuration changes (striping and turn lane additions);
2. Adding flashing yellow arrows to intersections that do not have them;
3. Traffic signal timing optimization;
4. Remove split phasing;
5. Combination of improvements 1-4.

Table 3 includes the study intersections operating at LOS E and F, the existing lane configurations, existing LOS, proposed improvements, and existing short term proposed improvements LOS.

2034 No-Build LOS

Existing traffic volumes were projected out to the year 2034 (10 years) to evaluate the impact of growth on the study intersections. A growth rate of 4% per year was applied to existing turning movement counts to get the year 2034 projected No-Build volumes for analysis.

A 2034 No-Build Synchro model was created and the LOS results are shown in **Table 4 and Figures 3 and 4**.

Based upon the 2034 No-Build LOS analysis, the following intersections are projected to operate at LOS E or F:

1. Cullen Boulevard at McHard Road;
2. Hughes Road at Cullen Boulevard;
3. Hughes Ranch Road at SH 288/Country place;
4. SH 35 at McHard;
5. SH 35 at Orange Street;
6. SH 35 at Magnolia Parkway;
7. SH 35 at Oiler Drive/Bailey Drive;
8. SH 35 at Dixie Farm Road;
9. Pearland Parkway at Forest Park Drive/Summit Ridge Road;
10. Pearland Parkway at Hughes Road/Barry Rose Drive;
11. Pearland Parkway at Province Village Drive;
12. Pearland Parkway at FM 518;

Table 3. 2024 Short Term Improvements LOS

INTERSECTION	EXISTING APPROACH																	PROPOSED APPROACH																
	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				INTERSECTION	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				INTERSECTION
LANE CONFIGURATION																	LOS																	LOS
3-SH 35 AT MCHARD	EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU	THRU/RIGHT	EXCLUSIVE LEFT	THRU	THRU	THRU/RIGHT	AM -D PM - E	EXCLUSIVE LEFT	THRU	THRU	RIGHT	EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU	RIGHT	AM -D PM - D
5-SH 35 AT ORANGE STREET	EXCLUSIVE LEFT		THRU/RIGHT		EXCLUSIVE LEFT		THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU	THRU/RIGHT	EXCLUSIVE LEFT	THRU	THRU	THRU/RIGHT	AM -D PM - D	EXCLUSIVE LEFT		THRU/RIGHT		EXCLUSIVE LEFT		THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU	THRU/RIGHT	EXCLUSIVE LEFT	THRU	THRU	THRU/RIGHT	AM - C PM - C
8-SH 35 AT MAGNOLIA PARKWAY	EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU	THRU/RIGHT	EXCLUSIVE LEFT	THRU	THRU	THRU/RIGHT	AM -E PM - F	EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU		AM -D PM - D
10-SH 35 AT BAILEY ROAD	EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU	THRU/RIGHT	EXCLUSIVE LEFT	THRU	THRU	THRU/RIGHT	AM -D PM - F	EXCLUSIVE LEFT	LEFT/THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT	EXCLUSIVE RIGHT	AM -C PM - D
14-BARRY ROSE ROAD/HUGHES ROAD AT PEARLAND PARKWY	EXCLUSIVE LEFT	LEFT/THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		AM -E PM - E	EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		AM -D PM - D
16-PEARLAND PARKWAY AT PROVINCE VILLAGE		LEFT/THRU		EXCLUSIVE RIGHT		THRU		EXCLUSIVE RIGHT	EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		AM - C PM - E		LEFT/THRU		EXCLUSIVE RIGHT		THRU		EXCLUSIVE RIGHT	EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		AM - C PM - D
17-PEARLAND PARKWAY AT FM 518	EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		DUAL LEFT	THRU	THRU/RIGHT		AM -E PM - E	EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU	EXCLUSIVE RIGHT	DUAL LEFT	THRU	THRU	EXCLUSIVE RIGHT	AM -D PM - F
18-PEARLAND PARKWAY AT JOHN LIZER ROAD	EXCLUSIVE LEFT		THRU/RIGHT		EXCLUSIVE LEFT		THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		AM - D PM - F	EXCLUSIVE LEFT		THRU/RIGHT		EXCLUSIVE LEFT		THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		EXCLUSIVE LEFT	THRU	THRU/RIGHT		AM - D PM - D

REVISED LANE CONFIGURATIONS

FLASHING YELLOW ARROW FOR LEFT TURN AND SIGNAL OPTIMIZATION

FLASHING YELLOW ARROW AND REMOVE SPLIT PHASING

FLASHING YELLOW ARROW, REMOVE SPLIT PHASING AND LANE CONFIGURATIONS

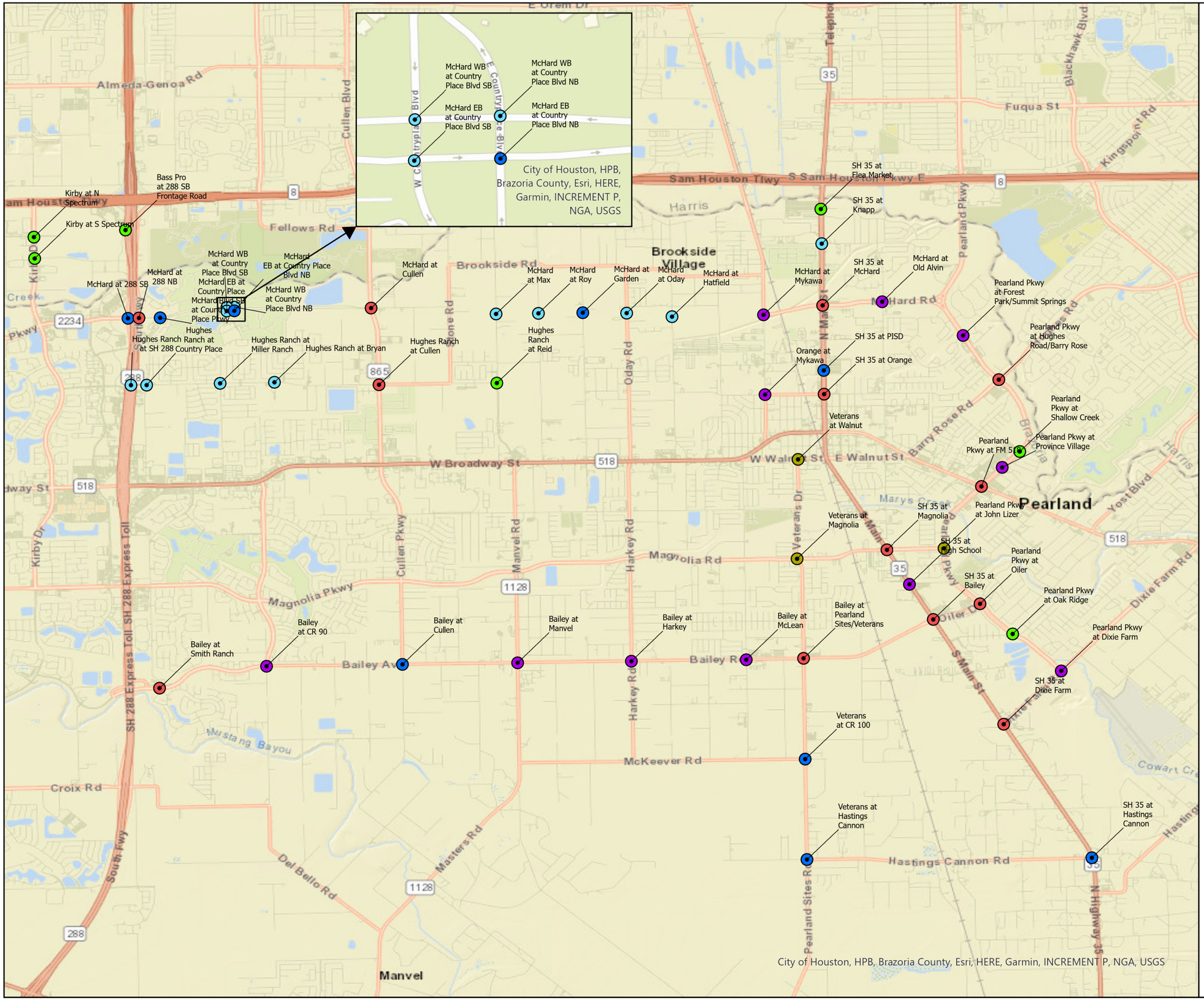
13. Pearland Parkway at John Lizer Road;
14. Pearland Parkway at Oiler Drive;
15. Pearland Parkway at Dixie Farm Road;
16. Veterans Drive at Walnut Street;
17. Veterans Drive at Magnolia Road;
18. Bailey Road at Veterans Drive/Sites Road;
19. Bailey Road at Hankey Drive;
20. Bailey Road at Smith Ranch Road;
21. McHard Road at SH 288 Northbound Frontage Road:
22. McHard Road/Siena Parkway at SH 288 Southbound Frontage Road.

Table 4. Projected 2034 No-Build LOS

Street_number	Intersection	Longitude	Latitude	2024 AM Exisiting LOS	2024 AM Exisiting ICU LOS	2024 PM Exisiting LOS	2024 PM Exisiting ICU LOS	2034 AM No Build LOS	2034 AM No Build ICU LOS	2034 PM No Build LOS	2034 PM No Build ICU LOS
1	SH 35 at Flea Market	-95.28664922	29.59601185	A	A	A	A	A	B	A	C
2	SH 35 at Knapp	-95.28651995	29.59100428	A	A	A	A	B	B	B	C
3	SH 35 at McHard	-95.28638957	29.58206418	D	D	E	E	F	G	F	H
4	SH 35 at PISD	-95.28622798	29.57264899	B	A	C	B	C	C	D	D
5	SH 35 at Orange	-95.28617507	29.56921256	D	C	D	B	F	F	D	C
8	SH 35 at Magnolia	-95.27707755	29.54667284	E	D	F	E	F	F	F	H
9	SH 35 at High School	-95.27375478	29.54167512	B	B	A	A	D	D	B	C
10	SH 35 at Bailey	-95.27030828	29.53659172	D	C	F	E	F	E	F	H
11	SH 35 at Dixie Farm	-95.2601248	29.52141855	C	D	C	D	F	G	F	G
12	SH 35 at Hastings Cannon	-95.24737961	29.5020822	B	B	B	C	C	E	D	F
13	Pearland Pkwy at Forest Park/Summit Springs	-95.2659975	29.57770974	B	C	B	C	D	F	F	F
14	Pearland Pkwy at Hughes Road/Barry Rose	-95.26083394	29.57131701	E	E	E	E	F	H	F	H
15	Pearland Pkwy at Shallow Creek	-95.25780644	29.56090919	A	A	B	B	A	A	C	D
16	Pearland Pkwy at Province Village	-95.26034219	29.55860963	C	A	E	C	D	B	F	E
17	Pearland Pkwy at FM 518	-95.26334185	29.5558512	E	D	E	D	F	H	F	H
18	Pearland Pkwy at John Lizer	-95.26875418	29.54688926	D	C	F	D	E	E	F	G
19	Pearland Pkwy at Oiler	-95.26355252	29.53886103	F	E	F	F	F	H	F	H
20	Pearland Pkwy at Dixie Farm	-95.25180452	29.52913789	B	B	C	C	D	D	F	E
21	Bailey at Smith Ranch	-95.38244037	29.5266439	C	A	C	A	F	D	E	C
22	Bailey at CR 90	-95.36695034	29.52981416	B	A	B	A	D	B	C	B
23	Bailey at Cullen	-95.34728119	29.5300833	C	A	C	A	C	B	C	C
24	Bailey at Manvel	-95.33053732	29.53030981	C	C	C	C	D	E	D	E
25	Bailey at Harkey	-95.31407086	29.53054226	C	A	C	A	D	C	E	C
26	Bailey at McLean	-95.29744505	29.53075633	C	A	C	A	D	B	D	B
27	Bailey at Pearland Sites/Veterans	-95.28914967	29.53095926	C	B	D	C	F	D	F	E
28	McHard at Old Alvin	-95.27776955	29.5825922	C	B	C	B	D	D	D	C
29	Orange at Mykawa	-95.29472875	29.5691426	C	A	B	A	D	C	C	B
30	McHard at Mykawa	-95.29494558	29.5806987	B	C	B	C	D	E	D	E
31	McHard at Hatfield	-95.30819118	29.58043253	B	A	B	A	B	B	C	B
32	McHard at Oday	-95.3147564	29.58094578	B	A	B	A	B	B	C	B
33	McHard at Garden	-95.32110512	29.58100804	B	A	B	A	C	A	C	A
34	McHard at Roy	-95.32752897	29.58091295	B	A	B	A	B	A	C	A
35	McHard at Max	-95.33365928	29.58082747	B	A	B	A	B	A	B	A
36	McHard at Cullen	-95.35181597	29.58167768	C	C	E	E	F	F	F	H
37	McHard EB at Country Place Blvd NB	-95.37161409	29.58128034	C	B	B	C	C	C	B	F
38	McHard WB at Country Place Blvd NB	-95.37161764	29.58181798	C	A	B	A	B	A	B	A

Table 4. Projected 2034 No-Build LOS

Street_number	Intersection	Longitude	Latitude	2024 AM Exisiting LOS	2024 AM Exisiting ICU LOS	2024 PM Exisiting LOS	2024 PM Exisiting ICU LOS	2034 AM No Build LOS	2034 AM No Build ICU LOS	2034 PM No Build LOS	2034 PM No Build ICU LOS
39	McHard WB at Country Place Blvd SB	-95.37269948	29.58177158	B	A	B	A	B	A	B	A
40	McHard EB at Country Place Blvd SB	-95.3727068	29.58125422	B	A	B	A	B	A	B	B
41	McHard at Country Place Pkwy	-95.38234942	29.58026973	B	B	B	A	C	E	B	B
42	McHard at 288 NB	-95.38541882	29.580242	D	B	C	E	F	E	F	H
43	McHard at 288 SB	-95.38700883	29.5801976	C	B	D	E	C	E	F	H
44	Veterans at Magnolia	-95.29008668	29.5453751	C	C	C	C	E	F	D	E
45	Veterans at CR 100	-95.28891639	29.51636658	B	A	B	A	C	C	C	C
46	Veterans at Hastings Cannon	-95.28865525	29.50183176	B	A	B	A	C	C	D	D
47	Veterans at Walnut	-95.28994649	29.55976634	B	A	C	B	E	C	F	D
48	Kirby at N Spectrum	-95.40062298	29.59195233	A	A	A	A	A	A	B	B
49	Kirby at S Spectrum	-95.400514	29.58885461	A	A	A	A	A	A	A	A
50	Hughes Ranch at SH 288	-95.38657662	29.5705166	A	A	C	A	B	C	E	B
51	Hughes Ranch at Country Place	-95.38430971	29.57051989	B	A	D	A	B	A	F	C
52	Hughes Ranch at Miller Ranch	-95.37367111	29.57077793	B	A	B	A	B	A	B	B
53	Hughes Ranch at Bryan	-95.36580944	29.57093098	A	A	A	A	B	B	A	A
54	Hughes Ranch at Cullen	-95.35067422	29.57057622	D	D	F	F	F	G	F	H
55	Hughes Ranch at Reid	-95.33354824	29.57081773	A	A	A	A	A	A	A	A
56	Pearland Pkwy at Oak Ridge	-95.25882915	29.53449186	A	A	A	A	A	A	A	A
58	Bass Pro at 288 SB Frontage Road	-95.38736944	29.59297778	A	A	A	A	A	B	A	F



GRADIENT
TRE FIRM f-5291
3151 BRIARPARK DRIVE, SUITE 225
HOUSTON, TX 77042
832.779.5700

Legend

2034 AM Peak Hour No Build LOS

- A
- B
- C
- D
- E
- F

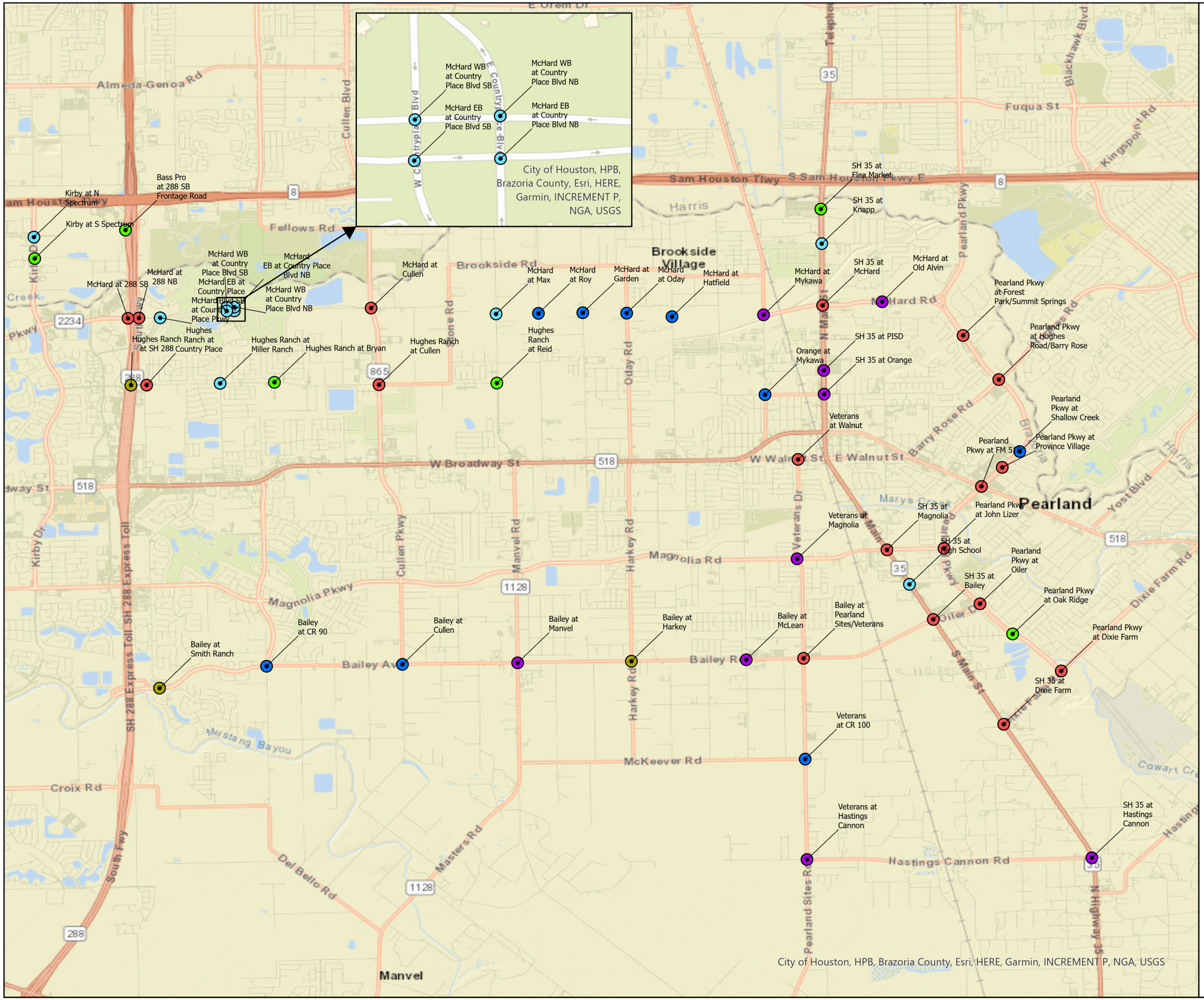
(Accident locations labeled with Object ID)

City of Pearland Mobility Study 2024

0 3,000 6,000 Feet

2034 AM NO BUILD PEAK HOUR LOS

8/30/2024



Legend

2034 PM Peak Hour No Build LOS

- A
- B
- C
- D
- E
- F

(Accident locations labeled with Object ID)

GRADIENT
TRE FIRM f-5291
3151 BRIARPARK DRIVE, SUITE 225
HOUSTON, TX 77042
832.779.5700

City of Pearland
Mobility Study 2024

0 3,000 6,000 Feet

2034 PM NO BUILD PEAK HOUR LOS

8/30/2024

2034 Build LOS

Based upon the 2034 No-Build LOS analysis, twenty two of the study intersections were found to operate at a LOS E or F during either the AM peak hour, PM peak hour, or both peak hours. The intersections found to be operating poorly include the following intersections:

1. Cullen Boulevard at McHard Road;
2. Hughes Road at Cullen Boulevard;
3. Hughes Ranch Road at SH 288/Country place;
4. SH 35 at McHard;
5. SH 35 at Orange Street;
6. SH 35 at Magnolia Parkway;
7. SH 35 at Oiler Drive/Bailey Drive;
8. SH 35 at Dixie Farm Road;
9. Pearland Parkway at Forest Park Drive/Summit Ridge Road;
10. Pearland Parkway at Hughes Road/Barry Rose Drive;
11. Pearland Parkway at Province Village Drive;
12. Pearland Parkway at FM 518;
13. Pearland Parkway at John Lizer Road;
14. Pearland Parkway at Oiler Drive;
15. Pearland Parkway at Dixie Farm Road;
16. Veterans Drive at Walnut Street;
17. Veterans Drive at Magnolia Road;
18. Bailey Road at Veterans Drive/Sites Road;
19. Bailey Road at Hankey Drive;
20. Bailey Road at Smith Ranch Road;
21. McHard Road at SH 288 Northbound Frontage Road:
22. McHard Road/Siena Parkway at SH 288 Southbound Frontage Road.

Improvements include to mitigate LOS deficiencies are as follows:

1. Lane configuration changes (striping and turn lane additions);
2. Adding flashing yellow arrows to intersections that do not have them;
3. Traffic signal timing optimization;
4. Remove split phasing;
5. Combination of improvements 1-4.

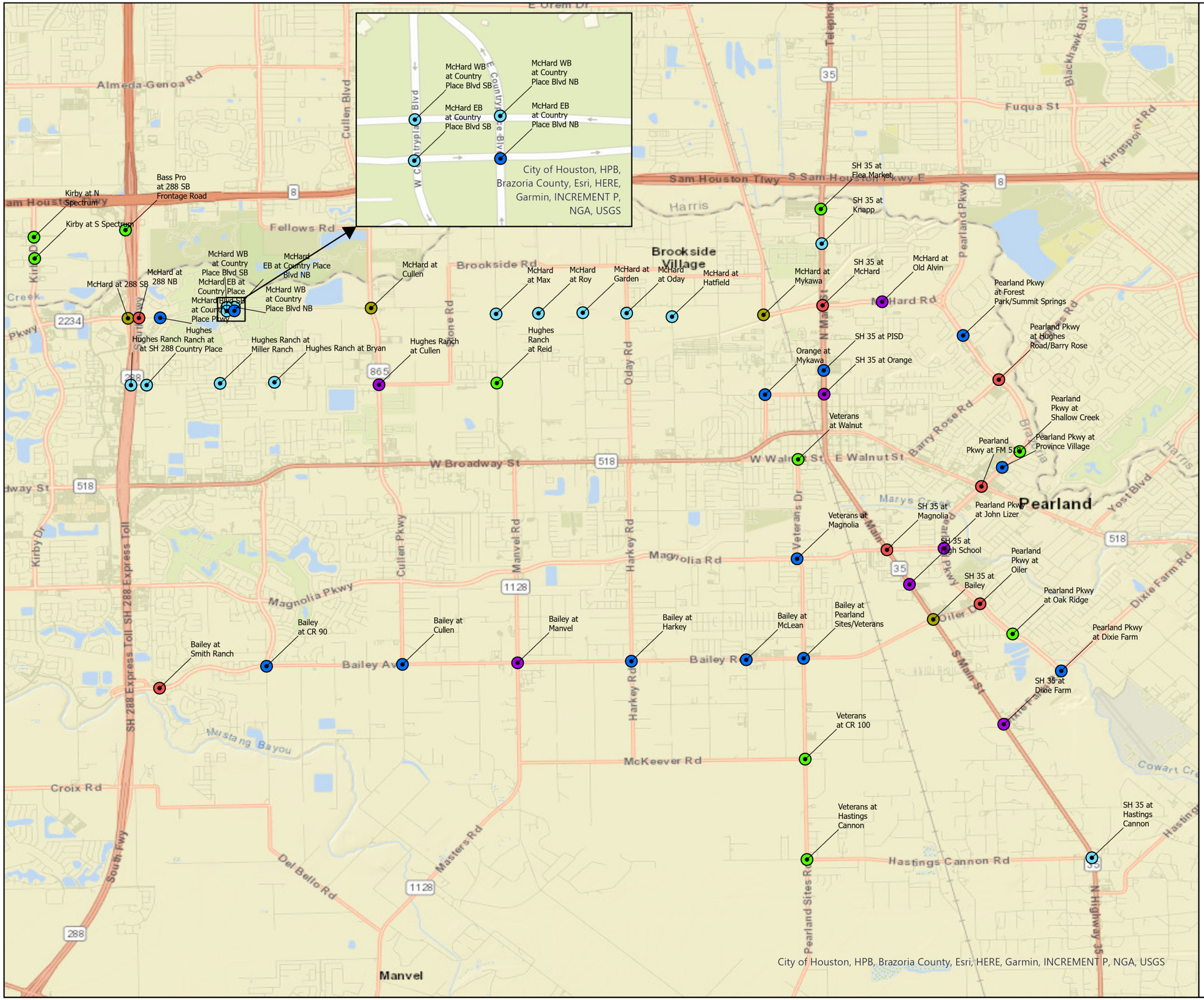
Table 5 includes the study intersections operating at LOS E and F, the existing lane configurations, existing LOS, proposed improvements, and existing short term proposed improvements LOS. It also includes projected LOS and improvements analyzed. **Figures 5 and 6** show the study intersections 2034 AM and PM peak hour LOS.

Table 5. 2034 Build LOS

Street_Number	Intersection	Existing 2024 Short Term Fixes	Long Term 2034 Fixes	2024 AM Exisiting LOS	2024 AM Exisiting ICU LOS	2024 PM Exisiting LOS	2024 PM Exisiting ICU LOS	2034 AM No Build LOS	2034 AM No Build ICU LOS	2034 PM No Build LOS	2034 PM No Build ICU LOS	2034 AM Buildout LOS	2034 AM Buildout ICU LOS	2034 PM Buildout LOS	2034 PM Buildout ICU LOS
1	SH 35 at Flea Market		no change	A	A	A	A	A	B	A	C	A	B	A	C
2	SH 35 at Knapp		no change	A	A	A	A	B	B	B	C	B	B	B	C
3	SH 35 at McHard		optimized no change	D	D	E	E	F	G	F	H	F	G	F	H
4	SH 35 at PISD	add striping for lefturn and	no change	B	A	C	B	C	C	D	D	C	B	C	D
5	SH 35 at Orange	install eastbound and westbound FYA	added lane on east bound and westbound approaches and made FYA	D	C	D	B	F	F	D	C	D	E	C	C
8	SH 35 at Magnolia	remove westbound thru left	optimized no change added lanes etc.	E	D	F	E	F	F	F	H	F	F	F	H
9	SH 35 at High School	this is now a B no change		B	B	A	A	D	D	B	C	D	D	B	C
10	SH 35 at Bailey	remove split phase and thru+ left movement on east and west legs	add left turn lanes on the east and westbound approaches utilizing the existing large median. Remove split phase and thru left movement	D	C	F	E	F	E	F	H	E	E	F	H
11	SH 35 at Dixie Farm		add north bound dedicated right turn lane added lane on each leg off dixie road	C	D	C	D	F	G	F	G	D	E	D	D
12	SH 35 at Hastings Cannon		added dedicated right light to eastbound approach	B	B	B	C	C	E	D	F	B	B	C	E
13	Pearland Pkwy at Forest Park/Summit Springs			B	C	B	C	D	F	F	F	C	F	C	F
14	Pearland Pkwy at Hughes Road/Barry Rose		remove split phase add northbound right and add left turns for east and westbound approaches remove thru left	E	E	E	E	F	H	F	H	F	G	E	F
15	Pearland Pkwy at Shallow Creek		remove FYA on east and westbound approaches due to the median size. Add left turn lane for eastbound approach. Install offsetting left turn lane for westbound approach Make north bound operation thru+left and thru+ right	A	A	B	B	A	A	C	D	A	A	C	D
16	Pearland Pkwy at Province Village		remove FYA on east and westbound approaches due to the median size. Add left turn lane for eastbound approach. Install offsetting left turn lane for westbound approach Make north bound operation thru+left and thru+ right	C	A	E	C	D	B	F	E	C	B	F	E
17	Pearland Pkwy at FM 518	can't fix	skipped	E	D	E	D	F	H	F	H	F	H	F	H
18	Pearland Pkwy at John	can't fix	add thru lanes on both side John Lize Road	D	C	F	D	E	E	F	G	D	D	F	F
19	Pearland Pkwy at Oiler	can't fix	remove FYA install northbound dual lefts	F	E	F	F	F	H	F	H	F	G	F	H
20	Pearland Pkwy at Dixie		added thru lanes on dixie road	B	B	C	C	D	D	F	E	C	C	C	D
21	Bailey at Smith Ranch		change northbound dedicated right lane to thru+ right	C	A	C	A	F	D	E	C	F	D	D	C
22	Bailey at CR 90		change southbound dedicated right lane to thru+ right. Add lane to northbound approach	B	A	B	A	D	B	C	B	C	B	C	B
23	Bailey at Cullen		Add lane to north and south approach	C	A	C	A	C	B	C	C	C	B	C	B
24	Bailey at Manvel		Add lane to north and south departure. And make dedicated right lane thru+ right	C	C	C	C	D	E	D	E	D	E	D	E
25	Bailey at Harkey		Add lane to north and south approach	C	A	C	A	D	C	E	C	C	C	C	C
26	Bailey at McLean		Add lane to north and south approach	C	A	C	A	D	B	D	B	C	B	C	B
27	Bailey at Pearland		Add lane to north, south and west approach	C	B	D	C	F	D	F	E	C	B	C	D

Table 5. 20334 Build LOS

reet_Number		Existing 2024 Short Term Fixes	Long Term 2034 Fixes	2024 AM Exisiting LOS	2024 AM Exisiting ICU LOS	2024 PM Exisiting LOS	2024 PM Exisiting ICU LOS	2034 AM No Build LOS	2034 AM No Build ICU LOS	2034 PM No Build LOS	2034 PM No Build ICU LOS	2034 AM Buildout LOS	2034 AM Buildout ICU LOS	2034 PM Buildout LOS	2034 PM Buildout ICU LOS
28	McHard at Old Alvin		bailey east of the intersection is 4 lanes	C	B	C	B	D	D	D	C	D	D	D	C
29	Orange at Mykawa		Add lane to east and west approach	C	A	B	A	D	C	C	B	C	B	C	B
30	McHard at Mykawa		Add lane to north and south approach	B	C	B	C	D	E	D	E	E	E	C	E
31	McHard at Hatfield		made intersection full boulevard for each approach	B	A	B	A	B	B	C	B	B	A	C	A
32	McHard at Oday		made intersection full boulevard for each approach	B	A	B	A	B	B	C	B	B	A	B	A
33	McHard at Garden		made intersection full boulevard for each approach	B	A	B	A	C	A	C	A	B	A	C	A
34	McHard at Roy		made intersection full boulevard for each approach	B	A	B	A	B	A	C	A	B	A	C	A
35	McHard at Max		made intersection full boulevard for each approach	B	A	B	A	B	A	B	A	B	A	B	A
36			no change	C	C	E	E	F	F	F	H	E	F	F	H
37	McHard EB at Country Place Blvd NB		no change	C	B	B	C	C	C	B	F	C	C	B	F
38	McHard WB at Country Place Blvd NB		no change	C	A	B	A	B	A	B	A	B	A	B	A
39	McHard WB at Country Place Blvd SB		no change	B	A	B	A	B	A	B	A	B	A	B	A
40	McHard EB at Country Place Blvd SB		no change	B	A	B	A	B	A	B	B	B	A	B	B
41	McHard at Country Place		no change	B	B	B	A	C	E	B	B	C	E	B	B
42	McHard at 288 NB		no change	D	B	C	E	F	E	F	H	F	E	F	H
43	McHard at 288 SB		no change	C	B	D	E	C	E	F	H	E	E	F	H
44	Veterans at Magnolia		fix alignment. Add lanes to north and south approaches	C	C	C	C	E	F	D	E	C	D	C	D
45	Veterans at CR 100		made full boulevard signalized	B	A	B	A	C	C	C	C	A	A	A	A
46	Veterans at Hastings		made full boulevard signalized	B	A	B	A	C	C	D	D	A	A	A	A
47	Veterans at Walnut		made signalized added westbound dedicated left turn lane.	B	A	C	B	E	C	F	D	A	A	B	B
48	Kirby at N Spectrum		no change	A	A	A	A	A	A	B	B	A	A	B	B
49	Kirby at S Spectrum		no change	A	A	A	A	A	A	A	A	A	A	A	A
50	Hughes Ranch at SH 288		no change	A	A	C	A	B	C	E	B	B	C	B	B
51	Hughes Ranch at Country		made each approach a full boulevard	B	A	D	A	B	A	F	C	B	A	C	C
52	Hughes Ranch at Miller		no change	B	A	B	A	B	A	B	B	B	A	B	B
53	Hughes Ranch at Bryan		no change	A	A	A	A	B	B	A	A	B	B	A	A
54	Hughes Ranch at Cullen	instal northbound southbound FYA	removed proposed FYA. made east leg a full boulevard removed eastbound dedicated right lane	D	D	F	F	F	G	F	H	D	F	F	H
55	Hughes Ranch at Reid		no change	A	A	A	A	A	A	A	A	A	A	A	A
56	Pearland Pkwy at Oak		no	A	A	A	A	A	A	A	A	A	A	A	A
58	Bass Pro at 288 SB			A	A	A	A	A	B	A	F	A	B	A	F



Legend

2034 AM Peak Hour Buildout LOS

- A
- B
- C
- D
- E
- F

(Accident locations labeled with Object ID)

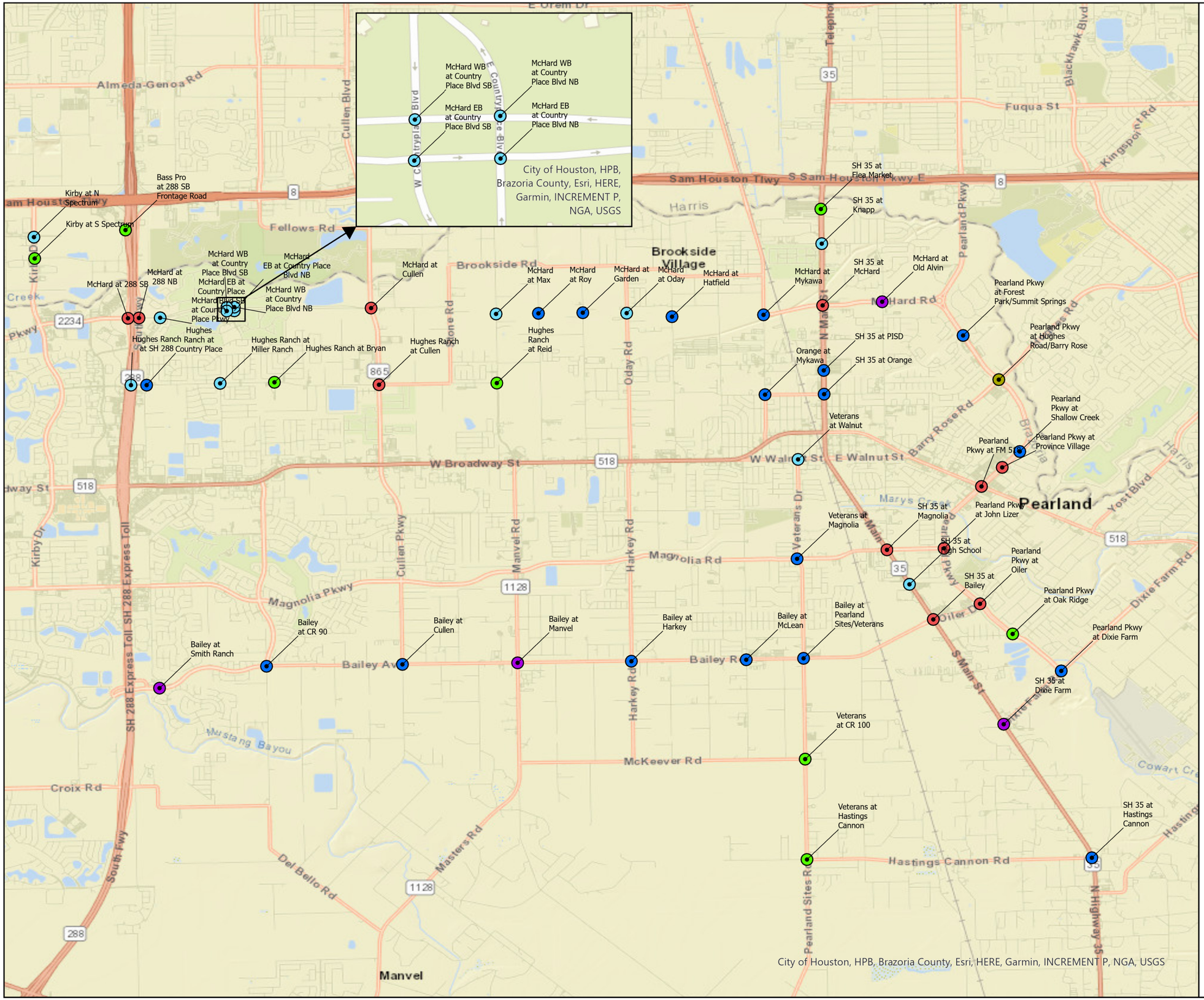
GRADIENT
TRE FIRM f-5291
3151 BRIARPARK DRIVE, SUITE 225
HOUSTON, TX 77042
832.779.5700

City of Pearland
Mobility Study 2024

0 3,000 6,000 Feet

2034 AM BUILDOUT PEAK HOUR LOS

8/30/2024



Legend

2034 PM Peak Hour Buildout LOS

- A
- B
- C
- D
- E
- F

(Accident locations labeled with Object ID)

GRADIENT
TRE FIRM f-5291
3151 BRIARPARK DRIVE, SUITE 225
HOUSTON, TX 77042
832.779.5700

City of Pearland
Mobility Study 2024

0 3,000 6,000 Feet

2034 PM BUILDOUT PEAK HOUR LOS

8/30/2024

LOCATION:
RECOMMENDATION
1. ADD WESTBOUND RIGHT TURN LANES
2. ADJUST SIGNAL PHASING

2034 AM PEAK LOS: F
2034 PM PEAK LOS: D
MEDIUM TERM IMPROVEMENT AM PEAK LOS: D
MEDIUM TERM IMPROVEMENT PM PEAK LOS: E

PLANNING LEVEL COST ESTIMATE:
$100,000



LOCATION:
RECOMMENDATION
1. ADD SECOND LEFT NORTHBOUND LEFT TURN LANE
2. MODIFY SIDEWALK AND ADA FACILITIES IN THE SOUTHWEST CORNER
3. REMOVE SPLIT PHASE

2034 AM PEAK LOS: F
2034 PM PEAK LOS: D
MEDIUM TERM IMPROVEMENT AM PEAK LOS: D
MEDIUM TERM IMPROVEMENT PM PEAK LOS: E

PLANNING LEVEL COST ESTIMATE:
$150,000



LOCATION:
RECOMMENDATION
1. ADD NORTHBOUND RIGHT TURN LANE
2. MODIFY SIDEWALK, RELOCATE SIGNAL POLE IN MEDIAN AND MODIFY ADA FACILITIES IN THE SOUTHEAST CORNER
3. ADJUST SIGNAL TIMINGS

2034 AM PEAK LOS: F
2034 PM PEAK LOS: F
MEDIUM TERM IMPROVEMENT AM PEAK LOS: C
MEDIUM TERM IMPROVEMENT PM PEAK LOS: D

PLANNING LEVEL COST ESTIMATE:
$195,000



LOCATION:
RECOMMENDATION
1.ADD EASTBOUND RIGHT TURN LANE
2. RELOCATE TRAFFIC SIGNAL POLES IN THE SOUTHEAST AND SOUTHWEST CORNERS
3. ADJUST SIGNAL TIMINGS

2034 AM PEAK LOS: C
2034 PM PEAK LOS: D
MEDIUM TERM IMPROVEMENT AM PEAK LOS: B
MEDIUM TERM IMPROVEMENT PM PEAK LOS: C

PLANNING LEVEL COST ESTIMATE:
$650,000



LOCATION:
RECOMMENDATION
1. ADD SECOND SOUTHBOUND AND WESTBOUND LEFT TURN LANES
2. MODIFY SIGNAL HEAD LAYOUTS FOR SOUTHBOUND AND WESTBOUND LEFT TURN LANE ADDITIONS
3. ADJUST SIGNAL TIMINGS

2034 AM PEAK LOS: F
2034 PM PEAK LOS: F
MEDIUM TERM IMPROVEMENT AM PEAK LOS: D
MEDIUM TERM IMPROVEMENT PM PEAK LOS: F

PLANNING LEVEL COST ESTIMATE:
$1,185,231



LOCATION:
RECOMMENDATION
1. ADD EASTBOUND, NORTHBOUND AND SOUTHBOUND RIGHT TURN LANES
2. MODIFY SIDEWALK AND ADA FACILITIES IN THE NORTHWEST AND SOUTHEAST CORNERS
3. ADJUST SIGNAL TIMINGS

2034 AM PEAK LOS: F
2034 PM PEAK LOS: F
MEDIUM TERM IMPROVEMENT AM PEAK LOS: E
MEDIUM TERM IMPROVEMENT PM PEAK LOS: E

PLANNING LEVEL COST ESTIMATE:
$300,469

0 30 60
SCALE IN FEET
1" = 60'

FM 518

PEARLAND PARKWAY

PEARLAND PARKWAY

FM 518

LOCATION:
RECOMMENDATION
1. WIDEN JOHN LIZER ROAD TO A FOUR LANE DIVIDED SECTION FROM PEARLAND PARKWAY TO JUST WEST OF EXISTING BRIDGE (APPROXIMATELY 1000 FEET)
2. MODIFY SIDEWALK AND ADA FACILITIES IN THE NORTHEAST AND SOUTHEAST CORNERS
3. REMOVE SPLIT PHASE

2034 AM PEAK LOS: E
2034 PM PEAK LOS: F
MEDIUM TERM IMPROVEMENT AM PEAK LOS: D
MEDIUM TERM IMPROVEMENT PM PEAK LOS: D

PLANNING LEVEL COST ESTIMATE:
$750,000



LOCATION:
RECOMMENDATION
1. ADD WESTBOUND RIGHT TURN LANE
2. MODIFY SIDEWALK AND ADA FACILITIES IN THE NORTHEAST AND NORTHWEST CORNERS
3. RELOCATE EXISTING TRAFFIC SIGNAL POLE IN THE NORTHWEST CORNER
4. ADJUST SIGNAL TIMINGS

2034 AM PEAK LOS: D
2034 PM PEAK LOS: F
MEDIUM TERM IMPROVEMENT AM PEAK LOS: B
MEDIUM TERM IMPROVEMENT PM PEAK LOS: C

PLANNING LEVEL COST ESTIMATE:
$185,000



LOCATION:
RECOMMENDATION
1. ADD EASTBOUND AND SOUTHBOUND RIGHT TURN LANES
2. MODIFY TRAFFIC SIGNAL POLE LOCATIONS IN NORTHWEST AND SOUTHWEST CORNERS
3. MODIFY EXISTING SIDEWALK AND ADA FACILITIES IN NORTHWEST AND SOUTHWEST CORNERS

2024 AM PEAK LOS: D
2024 PM PEAK LOS: E
SHORT TERM IMPROVEMENT AM PEAK LOS: D
SHORT TERM IMPROVEMENT PM PEAK LOS: D

PLANNING LEVEL COST ESTIMATE:
$368,934



LOCATION:
RECOMMENDATION
1. REMOVE EAST-WEST SPLIT PHASE
2. ADD FLASHING YELLOW ARROWS EASTBOUND AND WESTBOUND

2024 AM PEAK LOS: D
2024 PM PEAK LOS: D
SHORT TERM IMPROVEMENT AM PEAK LOS: C
SHORT TERM IMPROVEMENT PM PEAK LOS: C

PLANNING LEVEL COST ESTIMATE:
$12,000



LOCATION:
RECOMMENDATION
1. ADD RIGHT TURN BAYS AS SHOWN
2. MODIFY SIGNAL PHASING

2024 AM PEAK LOS: E
2024 PM PEAK LOS: F
SHORT TERM IMPROVEMENT AM PEAK LOS: D
SHORT TERM IMPROVEMENT PM PEAK LOS: E

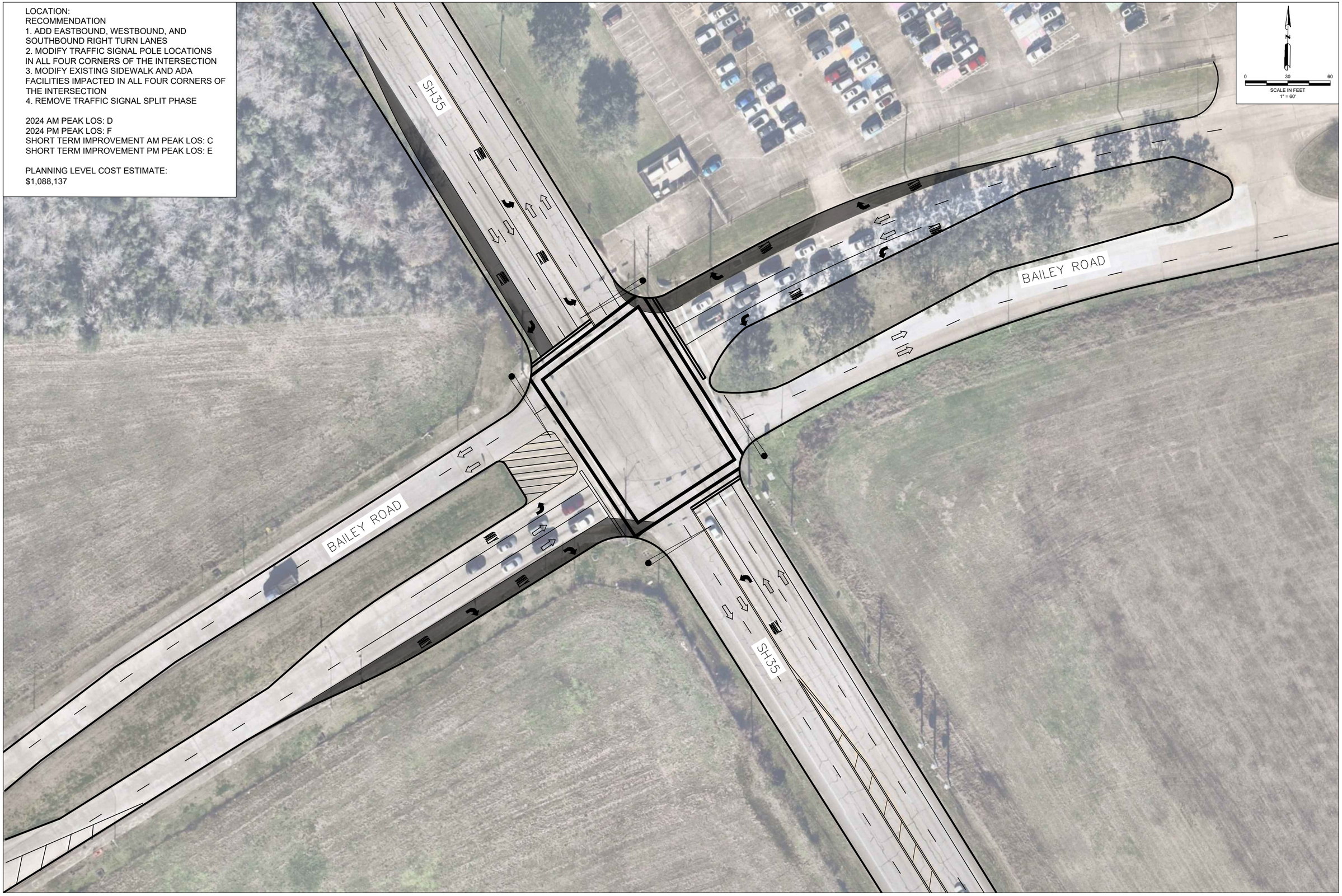
PLANNING LEVEL COST ESTIMATE:
$12,000



LOCATION:
RECOMMENDATION
1. ADD EASTBOUND, WESTBOUND, AND SOUTHBOUND RIGHT TURN LANES
2. MODIFY TRAFFIC SIGNAL POLE LOCATIONS IN ALL FOUR CORNERS OF THE INTERSECTION
3. MODIFY EXISTING SIDEWALK AND ADA FACILITIES IMPACTED IN ALL FOUR CORNERS OF THE INTERSECTION
4. REMOVE TRAFFIC SIGNAL SPLIT PHASE

2024 AM PEAK LOS: D
2024 PM PEAK LOS: F
SHORT TERM IMPROVEMENT AM PEAK LOS: C
SHORT TERM IMPROVEMENT PM PEAK LOS: E

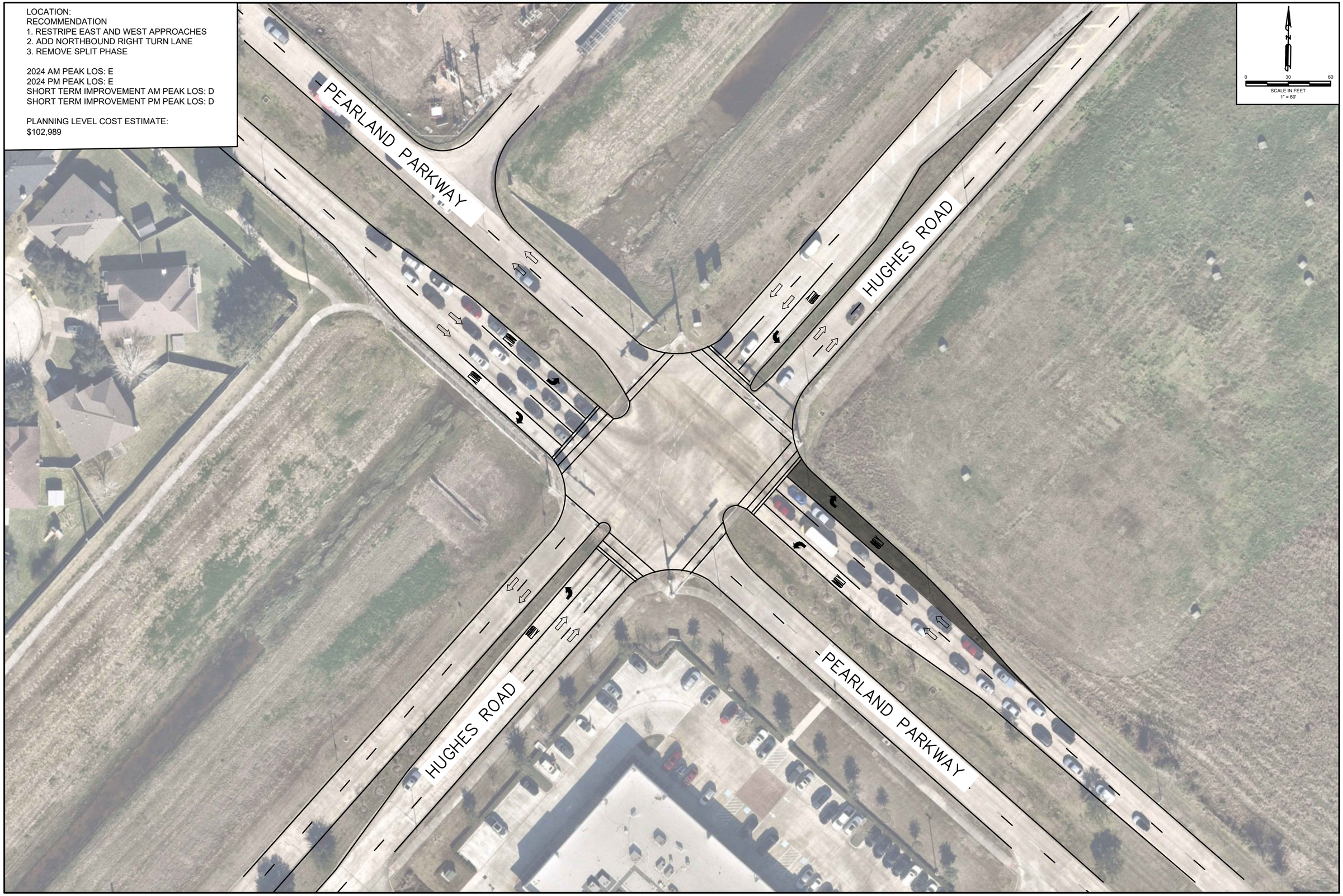
PLANNING LEVEL COST ESTIMATE:
$1,088,137



LOCATION:
RECOMMENDATION
1. RESTRIPE EAST AND WEST APPROACHES
2. ADD NORTHBOUND RIGHT TURN LANE
3. REMOVE SPLIT PHASE

2024 AM PEAK LOS: E
2024 PM PEAK LOS: E
SHORT TERM IMPROVEMENT AM PEAK LOS: D
SHORT TERM IMPROVEMENT PM PEAK LOS: D

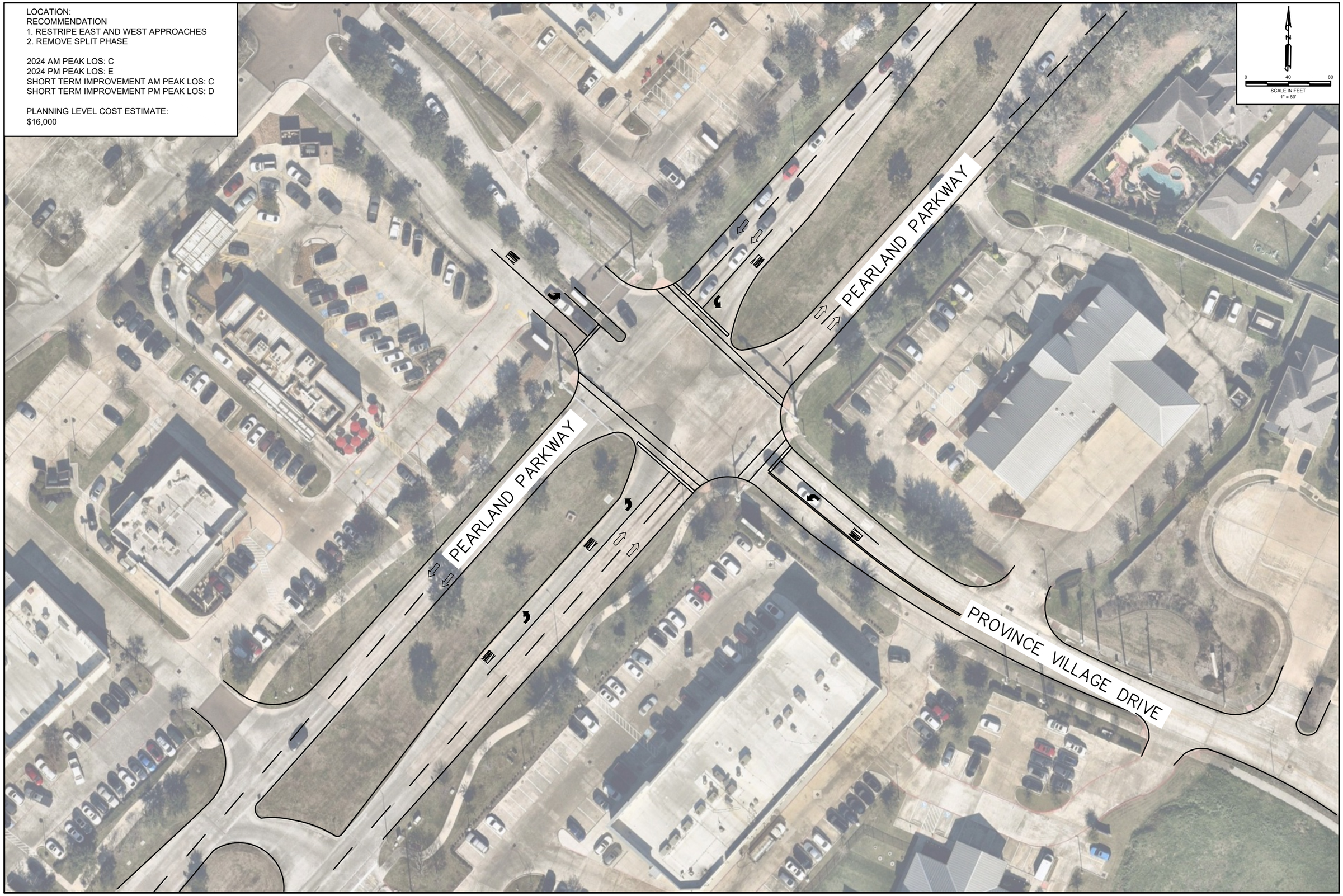
PLANNING LEVEL COST ESTIMATE:
$102,989



LOCATION:
RECOMMENDATION
1. RESTRIPE EAST AND WEST APPROACHES
2. REMOVE SPLIT PHASE

2024 AM PEAK LOS: C
2024 PM PEAK LOS: E
SHORT TERM IMPROVEMENT AM PEAK LOS: C
SHORT TERM IMPROVEMENT PM PEAK LOS: D

PLANNING LEVEL COST ESTIMATE:
$16,000



LOCATION:
RECOMMENDATION
1. ADD WESTBOUND RIGHT TURN LANE
2. ADJUST SIGNAL TIMINGS

2024 AM PEAK LOS: E
2024 PM PEAK LOS: E
SHORT TERM IMPROVEMENT AM PEAK LOS: D
SHORT TERM IMPROVEMENT PM PEAK LOS: E

PLANNING LEVEL COST ESTIMATE:
$99,570



LOCATION:
RECOMMENDATION
1. ADD SOUTHBOUND RIGHT TURN LANE
2. RECONSTRUCT TRAFFIC SIGNAL TO ACCOMMODATE SHORT TERM SOUTHBOUND RIGHT TURN LANE AND MEDIUM TERM IMPROVEMENTS ON JOHN LIZER ROAD EAST OF PEARLAND PARKWAY
3. MODIFY EXISTING SIDEWALK AND ADA FACILITIES IMPACTED IN NORTHWEST CORNER OF THE INTERSECTION
4. ADJUST SIGNAL TIMINGS

2024 AM PEAK LOS: D
2024 PM PEAK LOS: F
SHORT TERM IMPROVEMENT AM PEAK LOS: C
SHORT TERM IMPROVEMENT PM PEAK LOS: D

PLANNING LEVEL COST ESTIMATE:
$883,478

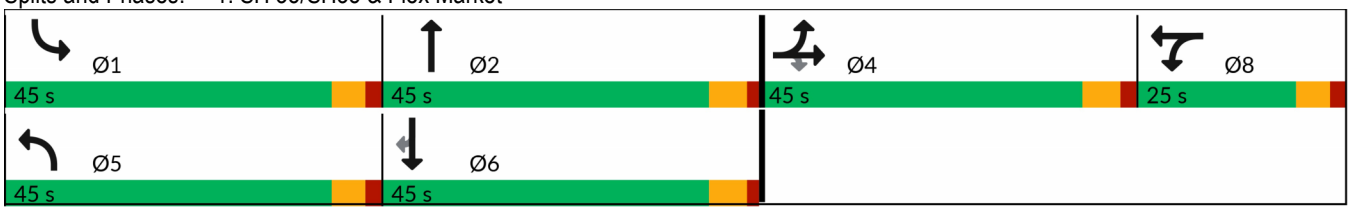


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	3	0	0	0	3	3	2297	6	12	1547	3
Future Volume (vph)	1	3	0	0	0	3	3	2297	6	12	1547	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	120		150
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	0			0			50			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt					0.865							0.850
Flt Protected		0.988					0.950			0.950		
Satd. Flow (prot)	0	1840	1863	0	1611	0	1770	5085	0	1770	5085	1583
Flt Permitted		0.988					0.950			0.950		
Satd. Flow (perm)	0	1840	1863	0	1611	0	1770	5085	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					724							106
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		769			683			1825			845	
Travel Time (s)		17.5			15.5			41.5			19.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	3	0	0	0	3	3	2497	7	13	1682	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	3	0	3	2504	0	13	1682	3
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Perm		NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	25.0	25.0	25.0	22.0	22.0		25.0	45.0		25.0	45.0	45.0
Total Split (s)	45.0	45.0	45.0	25.0	25.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	28.1%	28.1%	28.1%	15.6%	15.6%		28.1%	28.1%		28.1%	28.1%	28.1%
Maximum Green (s)	38.5	38.5	38.5	19.0	19.0		39.0	39.0		39.0	39.0	39.0
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max		None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0			5.0	5.0
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	0
Act Effct Green (s)		5.8			5.6		5.7	58.4		6.1	58.5	58.5
Actuated g/C Ratio		0.09			0.09		0.09	0.90		0.09	0.90	0.90
v/c Ratio		0.02			0.00		0.02	0.55		0.08	0.37	0.00
Control Delay (s/veh)		31.8			0.0		31.7	6.9		31.5	4.5	0.0
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)		31.8			0.0		31.7	6.9		31.5	4.5	0.0
LOS		C			A		C	A		C	A	A
Approach Delay (s/veh)		31.8						6.9			4.7	
Approach LOS		C						A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 65			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 6.0		Intersection LOS: A	
Intersection Capacity Utilization 58.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: SH 35/SH35 & Flex Market

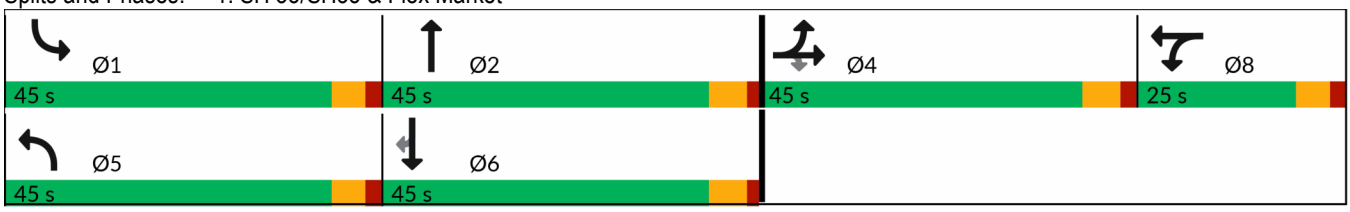


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	6	0	18	0	1599	3	3	2231	1
Future Volume (vph)	1	1	1	6	0	18	0	1599	3	3	2231	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	120		150
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	0			0			50			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt			0.850		0.900							0.850
Flt Protected		0.976			0.987					0.950		
Satd. Flow (prot)	0	1818	1583	0	1655	0	1863	5085	0	1770	5085	1583
Flt Permitted		0.976			0.987					0.950		
Satd. Flow (perm)	0	1818	1583	0	1655	0	1863	5085	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		106							106
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		769			683			1825			845	
Travel Time (s)		17.5			15.5			41.5			19.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1	1	7	0	20	0	1738	3	3	2425	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	1	0	27	0	0	1741	0	3	2425	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	25.0	25.0	25.0	22.0	22.0		25.0	45.0		25.0	45.0	45.0
Total Split (s)	45.0	45.0	45.0	25.0	25.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	28.1%	28.1%	28.1%	15.6%	15.6%		28.1%	28.1%		28.1%	28.1%	28.1%
Maximum Green (s)	38.5	38.5	38.5	19.0	19.0		39.0	39.0		39.0	39.0	39.0
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max		None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0			5.0	5.0
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	0
Act Effct Green (s)		5.7	5.7		5.6			56.8		5.8	58.8	58.8
Actuated g/C Ratio		0.09	0.09		0.08			0.85		0.09	0.88	0.88
v/c Ratio		0.01	0.00		0.11			0.40		0.02	0.54	0.00
Control Delay (s/veh)		33.5	0.0		1.0			5.4		33.3	4.3	0.0
Queue Delay		0.0	0.0		0.0			0.0		0.0	0.0	0.0
Total Delay (s/veh)		33.5	0.0		1.0			5.4		33.3	4.3	0.0
LOS		C	A		A			A		C	A	A
Approach Delay (s/veh)		22.3			1.0			5.4			4.3	
Approach LOS		C			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 66.9			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay (s/veh): 4.8		Intersection LOS: A	
Intersection Capacity Utilization 65.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: SH 35/SH35 & Flex Market

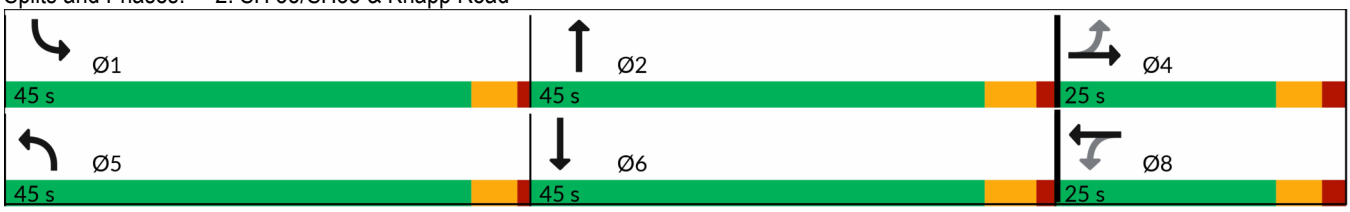


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	3	22	0	187	15	2097	21	43	1471	31
Future Volume (vph)	10	0	3	22	0	187	15	2097	21	43	1471	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	150		150	500		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.971			0.879			0.999			0.997	
Flt Protected		0.962			0.995		0.950			0.950		
Satd. Flow (prot)	0	1740	0	0	1629	0	1770	5080	0	1770	5070	0
Flt Permitted		0.464			0.960		0.950			0.950		
Satd. Flow (perm)	0	839	0	0	1572	0	1770	5080	0	1770	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			203			1			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			854			3272			1825	
Travel Time (s)		9.6			19.4			74.4			41.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	0	3	24	0	203	16	2279	23	47	1599	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	227	0	16	2302	0	47	1633	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		25.0	45.0		25.0	45.0	
Total Split (s)	25.0	25.0		25.0	25.0		45.0	45.0		45.0	45.0	
Total Split (%)	21.7%	21.7%		21.7%	21.7%		39.1%	39.1%		39.1%	39.1%	
Maximum Green (s)	19.0	19.0		19.0	19.0		40.0	39.0		40.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		5.0	6.0		5.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.7			7.7		6.3	39.7		7.3	44.9	
Actuated g/C Ratio		0.12			0.12		0.09	0.59		0.11	0.67	
v/c Ratio		0.09			0.63		0.10	0.76		0.24	0.48	
Control Delay (s/veh)		1.0			15.3		32.9	14.6		33.1	7.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		1.0			15.3		32.9	14.6		33.1	7.0	
LOS		A			B		C	B		C	A	
Approach Delay (s/veh)		1.0			15.3			14.8			7.7	
Approach LOS		A			B			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 66.9			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 12.0		Intersection LOS: B	
Intersection Capacity Utilization 63.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: SH 35/SH35 & Knapp Road

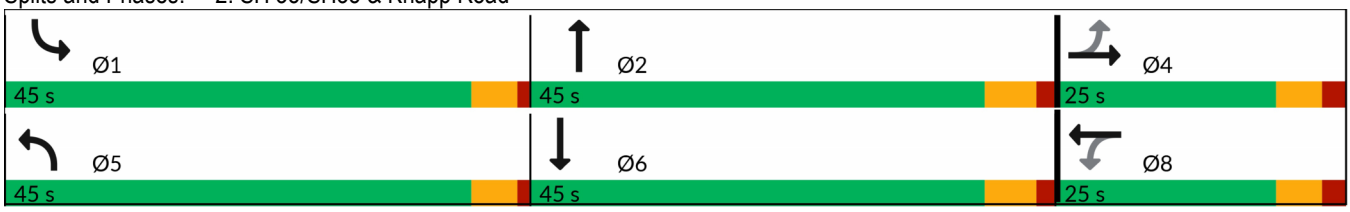


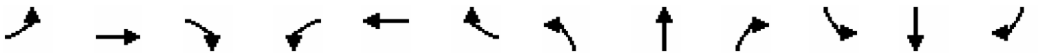
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	0	1	25	0	86	3	1452	30	151	2127	9
Future Volume (vph)	22	0	1	25	0	86	3	1452	30	151	2127	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	150		150	500		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.995			0.895			0.997			0.999	
Flt Protected		0.954			0.989		0.950			0.950		
Satd. Flow (prot)	0	1768	0	0	1649	0	1770	5070	0	1770	5080	0
Flt Permitted		0.640			0.915		0.950			0.950		
Satd. Flow (perm)	0	1186	0	0	1525	0	1770	5070	0	1770	5080	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			93			3			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			854			3272			1825	
Travel Time (s)		9.6			19.4			74.4			41.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	0	1	27	0	93	3	1578	33	164	2312	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	120	0	3	1611	0	164	2322	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		25.0	45.0		25.0	45.0	
Total Split (s)	25.0	25.0		25.0	25.0		45.0	45.0		45.0	45.0	
Total Split (%)	21.7%	21.7%		21.7%	21.7%		39.1%	39.1%		39.1%	39.1%	
Maximum Green (s)	19.0	19.0		19.0	19.0		40.0	39.0		40.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		5.0	6.0		5.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.5			7.5		5.7	40.3		12.5	55.7	
Actuated g/C Ratio		0.10			0.10		0.07	0.52		0.16	0.72	
v/c Ratio		0.14			0.52		0.02	0.61		0.58	0.63	
Control Delay (s/veh)		1.6			20.1		35.7	15.1		38.4	7.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		1.6			20.1		35.7	15.1		38.4	7.6	
LOS		A			C		D	B		D	A	
Approach Delay (s/veh)		1.6			20.1			15.1			9.7	
Approach LOS		A			C			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 77.3			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 12.0		Intersection LOS: B	
Intersection Capacity Utilization 65.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: SH 35/SH35 & Knapp Road



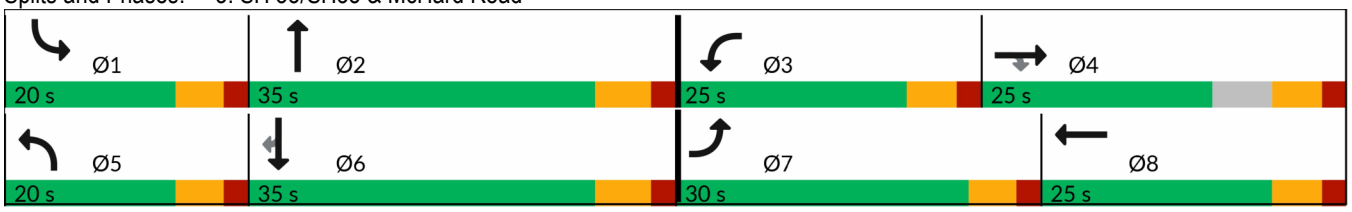


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	426	435	431	221	571	117	271	1594	127	64	1152	306
Future Volume (vph)	426	435	431	221	571	117	271	1594	127	64	1152	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		250	200		150	150		150	500		250
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.91	1.00
Frt			0.850		0.975			0.989				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3451	0	1770	5029	0	1770	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3451	0	1770	5029	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			303		19			11				333
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1441			2786			3440			3272	
Travel Time (s)		32.8			63.3			78.2			74.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	463	473	468	240	621	127	295	1733	138	70	1252	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	463	473	468	240	748	0	295	1871	0	70	1252	333
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2		1	2		1	2	0
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100		20	100		20	100	0
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	0	20	6		20	6		20	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	20.0	24.0	24.0	15.0	24.0		15.0	30.0		15.0	30.0	30.0
Total Split (s)	30.0	25.0	25.0	25.0	25.0		20.0	35.0		20.0	35.0	35.0
Total Split (%)	27.3%	22.7%	22.7%	22.7%	22.7%		18.2%	31.8%		18.2%	31.8%	31.8%
Maximum Green (s)	24.0	19.0	19.0	19.0	19.0		14.0	28.5		14.0	28.5	28.5
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.5		6.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max		None	Max	Max
Walk Time (s)		7.0	7.0		7.0			7.0			5.0	5.0
Flash Don't Walk (s)		11.0	11.0		11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	24.0	25.2	25.2	17.8	19.0		14.0	35.2		9.7	28.5	28.5
Actuated g/C Ratio	0.22	0.23	0.23	0.16	0.17		0.13	0.32		0.09	0.26	0.26
v/c Ratio	1.20	0.58	0.79	0.84	1.22		1.31	1.16		0.45	0.95	0.51
Control Delay (s/veh)	150.6	41.5	24.6	70.0	153.5		207.0	113.6		56.0	56.0	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	150.6	41.5	24.6	70.0	153.5		207.0	113.6		56.0	56.0	6.6
LOS	F	D	C	E	F		F	F		E	E	A
Approach Delay (s/veh)		71.8			133.2			126.3			46.0	
Approach LOS		E			F			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.31			
Intersection Signal Delay (s/veh): 93.7		Intersection LOS: F	
Intersection Capacity Utilization 101.3%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3: SH 35/SH35 & McHard Road

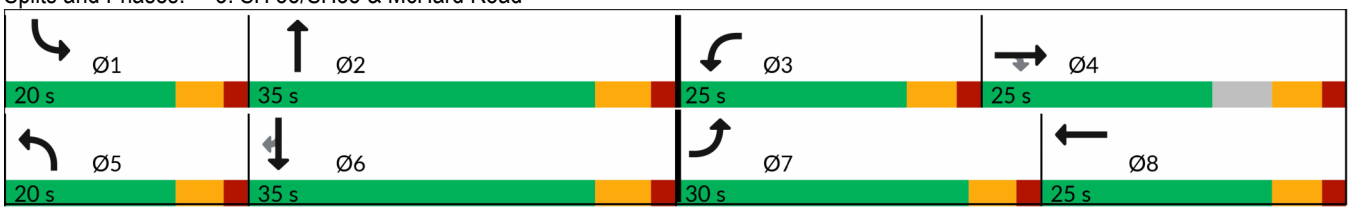


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	287	617	298	222	622	62	250	1115	173	231	1560	506
Future Volume (vph)	287	617	298	222	622	62	250	1115	173	231	1560	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		250	200		150	150		150	500		250
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.91	1.00
Frt			0.850		0.986			0.980				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3490	0	1770	4984	0	1770	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3490	0	1770	4984	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			302		8			26				417
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1441			2786			3440			3272	
Travel Time (s)		32.8			63.3			78.2			74.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	312	671	324	241	676	67	272	1212	188	251	1696	550
Shared Lane Traffic (%)												
Lane Group Flow (vph)	312	671	324	241	743	0	272	1400	0	251	1696	550
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2		1	2		1	2	0
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100		20	100		20	100	0
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	0	20	6		20	6		20	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	20.0	24.0	24.0	15.0	24.0		15.0	30.0		15.0	30.0	30.0
Total Split (s)	30.0	25.0	25.0	25.0	25.0		20.0	35.0		20.0	35.0	35.0
Total Split (%)	27.3%	22.7%	22.7%	22.7%	22.7%		18.2%	31.8%		18.2%	31.8%	31.8%
Maximum Green (s)	24.0	19.0	19.0	19.0	19.0		14.0	28.5		14.0	28.5	28.5
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.5		6.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max		None	Max	Max
Walk Time (s)		7.0	7.0		7.0			7.0			5.0	5.0
Flash Don't Walk (s)		11.0	11.0		11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	22.0	23.4	23.4	17.6	19.0		14.0	28.5		14.0	28.5	28.5
Actuated g/C Ratio	0.20	0.22	0.22	0.16	0.18		0.13	0.26		0.13	0.26	0.26
v/c Ratio	0.87	0.87	0.56	0.84	1.20		1.19	1.05		1.10	1.26	0.76
Control Delay (s/veh)	65.7	54.9	9.7	69.0	143.2		161.2	77.2		132.2	159.7	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	65.7	54.9	9.7	69.0	143.2		161.2	77.2		132.2	159.7	16.9
LOS	E	D	A	E	F		F	E		F	F	B
Approach Delay (s/veh)		46.2			125.0			90.8			125.5	
Approach LOS		D			F			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 108			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.26			
Intersection Signal Delay (s/veh): 100.4		Intersection LOS: F	
Intersection Capacity Utilization 99.5%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: SH 35/SH35 & McHard Road

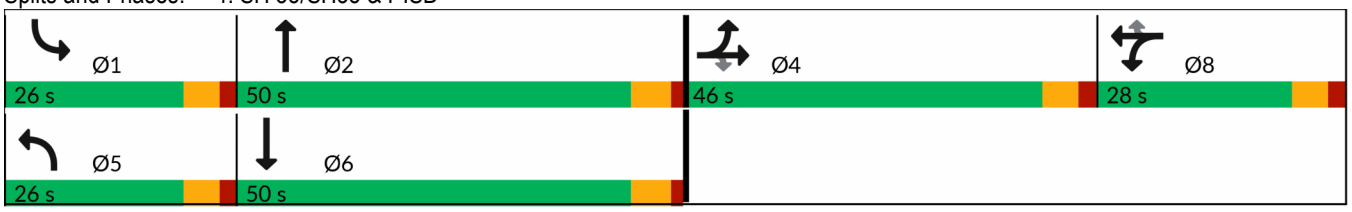


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	16	78	4	28	101	1881	151	61	1332	24
Future Volume (vph)	0	0	16	78	4	28	101	1881	151	61	1332	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt			0.850			0.850		0.989			0.997	
Flt Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	1863	1583	0	1777	1583	1770	5029	0	1770	5070	0
Flt Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	1863	1583	0	1777	1583	1770	5029	0	1770	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			387			109		9			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		568			482			1254			3440	
Travel Time (s)		12.9			11.0			28.5			78.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	17	85	4	30	110	2045	164	66	1448	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	17	0	89	30	110	2209	0	66	1474	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	0	20	6	0	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type			Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0	45.0	25.0	25.0	25.0	25.0	45.0		25.0	24.0	
Total Split (s)	46.0	46.0	46.0	28.0	28.0	28.0	26.0	50.0		26.0	50.0	
Total Split (%)	30.7%	30.7%	30.7%	18.7%	18.7%	18.7%	17.3%	33.3%		17.3%	33.3%	
Maximum Green (s)	40.0	40.0	40.0	22.0	22.0	22.0	20.0	44.0		20.0	44.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)			10.2		10.1	10.1	11.1	54.1		9.0	47.5	
Actuated g/C Ratio			0.11		0.11	0.11	0.12	0.60		0.10	0.53	
v/c Ratio			0.03		0.45	0.11	0.50	0.73		0.37	0.55	
Control Delay (s/veh)			0.1		47.3	0.8	47.3	21.0		47.3	18.3	
Queue Delay			0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)			0.1		47.3	0.8	47.3	21.0		47.3	18.3	
LOS			A		D	A	D	C		D	B	
Approach Delay (s/veh)		0.1			35.6			22.3			19.6	
Approach LOS		A			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 89.5			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 21.5		Intersection LOS: C	
Intersection Capacity Utilization 62.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: SH 35/SH35 & PISD

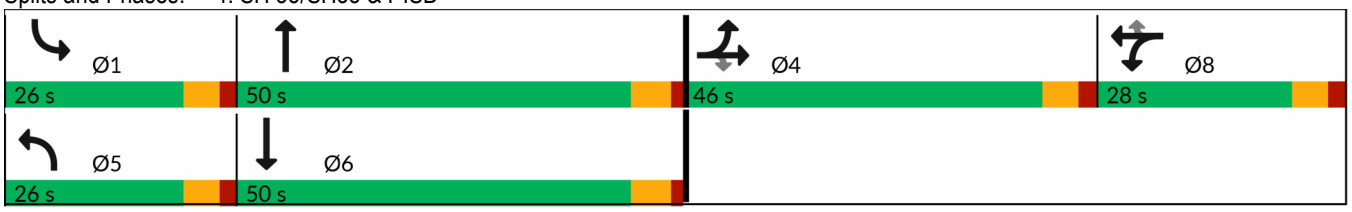


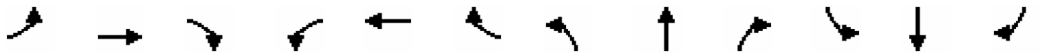
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	3	58	280	0	56	21	1184	262	154	1893	1
Future Volume (vph)	33	3	58	280	0	56	21	1184	262	154	1893	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt			0.850			0.850		0.973				
Flt Protected		0.956			0.950		0.950			0.950		
Satd. Flow (prot)	0	1781	1583	0	1770	1583	1770	4948	0	1770	5085	0
Flt Permitted		0.956			0.950		0.950			0.950		
Satd. Flow (perm)	0	1781	1583	0	1770	1583	1770	4948	0	1770	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109			109		33				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		568			482			1254			3440	
Travel Time (s)		12.9			11.0			28.5			78.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	3	63	304	0	61	23	1287	285	167	2058	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	63	0	304	61	23	1572	0	167	2059	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	0	20	6	0	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0	45.0	25.0	25.0	25.0	25.0	45.0		25.0	24.0	
Total Split (s)	46.0	46.0	46.0	28.0	28.0	28.0	26.0	50.0		26.0	50.0	
Total Split (%)	30.7%	30.7%	30.7%	18.7%	18.7%	18.7%	17.3%	33.3%		17.3%	33.3%	
Maximum Green (s)	40.0	40.0	40.0	22.0	22.0	22.0	20.0	44.0		20.0	44.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		10.2	10.2		22.2	22.2	7.1	44.4		15.7	58.2	
Actuated g/C Ratio		0.09	0.09		0.20	0.20	0.06	0.39		0.14	0.52	
v/c Ratio		0.24	0.26		0.88	0.15	0.21	0.80		0.68	0.79	
Control Delay (s/veh)		54.8	4.2		71.4	1.8	57.0	34.7		61.4	27.2	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		54.8	4.2		71.4	1.8	57.0	34.7		61.4	27.2	
LOS		D	A		E	A	E	C		E	C	
Approach Delay (s/veh)		23.6			59.8			35.0			29.8	
Approach LOS		C			E			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 112.8			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 34.1		Intersection LOS: C	
Intersection Capacity Utilization 77.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: SH 35/SH35 & PISD



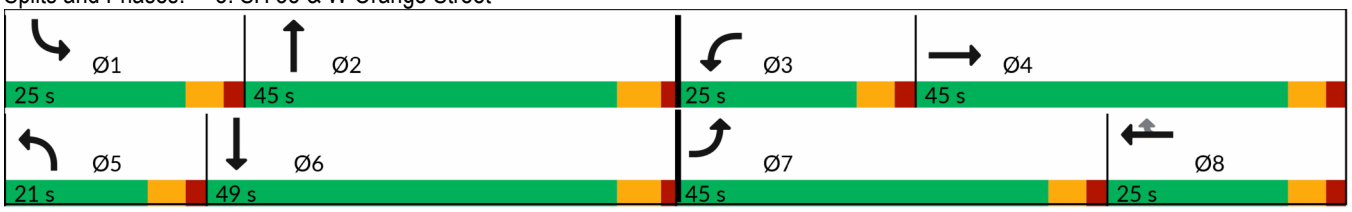


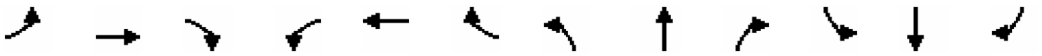
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	195	89	117	123	235	80	1679	64	150	1279	55
Future Volume (vph)	170	195	89	117	123	235	80	1679	64	150	1279	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	200		100	200		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.953				0.850		0.994			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1775	0	1770	1863	1583	1770	5055	0	1770	5055	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1775	0	1770	1863	1583	1770	5055	0	1770	5055	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				255		4			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2722			832			2002			1254	
Travel Time (s)		61.9			18.9			45.5			28.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	212	97	127	134	255	87	1825	70	163	1390	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	309	0	127	134	255	87	1895	0	163	1450	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	0	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0		25.0	25.0	25.0	20.0	45.0		25.0	45.0	
Total Split (s)	45.0	45.0		25.0	25.0	25.0	21.0	45.0		25.0	49.0	
Total Split (%)	32.1%	32.1%		17.9%	17.9%	17.9%	15.0%	32.1%		17.9%	35.0%	
Maximum Green (s)	39.0	39.0		19.0	19.0	19.0	15.0	39.0		19.0	43.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)	17.9	25.0		13.6	20.7	20.7	11.0	39.6		15.4	47.1	
Actuated g/C Ratio	0.15	0.21		0.12	0.18	0.18	0.09	0.34		0.13	0.40	
v/c Ratio	0.69	0.80		0.62	0.41	0.52	0.53	1.11		0.71	0.72	
Control Delay (s/veh)	62.4	57.9		65.7	48.4	9.4	65.9	97.6		68.4	35.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	62.4	57.9		65.7	48.4	9.4	65.9	97.6		68.4	35.4	
LOS	E	E		E	D	A	E	F		E	D	
Approach Delay (s/veh)		59.6			33.4			96.2			38.8	
Approach LOS		E			C			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 117.9			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay (s/veh): 65.1		Intersection LOS: E	
Intersection Capacity Utilization 84.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: SH 35 & W Orange Street



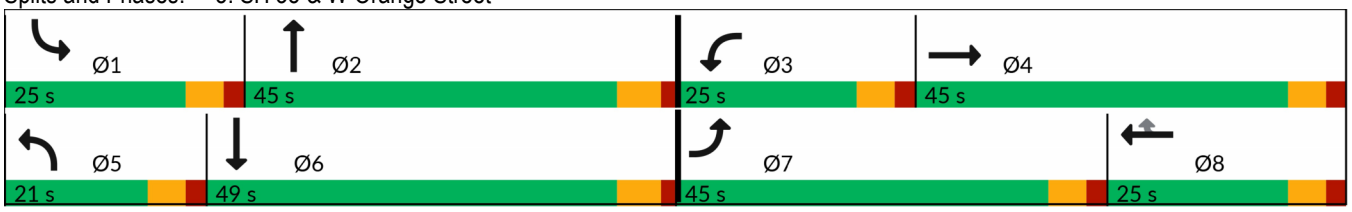


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	112	144	110	155	110	115	1054	110	133	2013	150
Future Volume (vph)	170	112	144	110	155	110	115	1054	110	133	2013	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	200		100	200		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.916				0.850		0.986			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1706	0	1770	1863	1583	1770	5014	0	1770	5034	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1706	0	1770	1863	1583	1770	5014	0	1770	5034	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46				164		12			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2722			832			2002			1254	
Travel Time (s)		61.9			18.9			45.5			28.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	122	157	120	168	120	125	1146	120	145	2188	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	279	0	120	168	120	125	1266	0	145	2351	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	0	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0		25.0	25.0	25.0	20.0	45.0		25.0	45.0	
Total Split (s)	45.0	45.0		25.0	25.0	25.0	21.0	45.0		25.0	49.0	
Total Split (%)	32.1%	32.1%		17.9%	17.9%	17.9%	15.0%	32.1%		17.9%	35.0%	
Maximum Green (s)	39.0	39.0		19.0	19.0	19.0	15.0	39.0		19.0	43.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effct Green (s)	17.5	21.5		13.1	17.1	17.1	12.6	41.8		14.3	43.6	
Actuated g/C Ratio	0.15	0.19		0.11	0.15	0.15	0.11	0.36		0.12	0.38	
v/c Ratio	0.69	0.78		0.60	0.61	0.32	0.65	0.69		0.66	1.23	
Control Delay (s/veh)	60.8	53.4		62.9	56.6	4.5	67.5	35.4		64.8	140.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	60.8	53.4		62.9	56.6	4.5	67.5	35.4		64.8	140.8	
LOS	E	D		E	E	A	E	D		E	F	
Approach Delay (s/veh)		56.4			43.1			38.3			136.4	
Approach LOS		E			D			D			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 115			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.23			
Intersection Signal Delay (s/veh): 91.9		Intersection LOS: F	
Intersection Capacity Utilization 89.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: SH 35 & W Orange Street

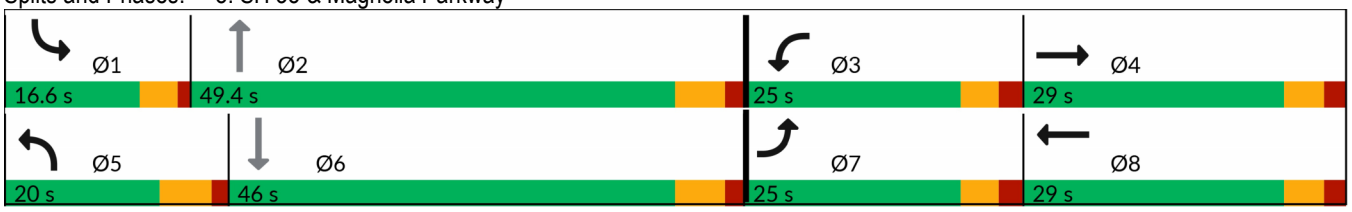


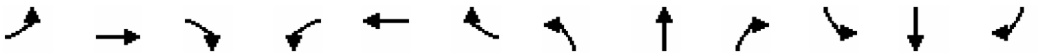
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	407	665	198	155	483	139	218	1116	129	90	629	198
Future Volume (vph)	407	665	198	155	483	139	218	1116	129	90	629	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		0	380		0	180		0	180		160
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.966			0.966			0.984			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3419	0	1770	3419	0	1770	3483	0	1770	3412	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3419	0	1770	3419	0	1770	3483	0	1770	3412	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			27			12			38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4203			1078			2138			5584	
Travel Time (s)		95.5			24.5			48.6			126.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	442	723	215	168	525	151	237	1213	140	98	684	215
Shared Lane Traffic (%)												
Lane Group Flow (vph)	442	938	0	168	676	0	237	1353	0	98	899	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5			1		
Permitted Phases								2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		20.0	45.0		9.5	45.0	
Total Split (s)	25.0	29.0		25.0	29.0		20.0	49.4		16.6	46.0	
Total Split (%)	20.8%	24.2%		20.8%	24.2%		16.7%	41.2%		13.8%	38.3%	
Maximum Green (s)	19.5	23.5		19.5	23.5		14.0	43.4		12.1	40.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		4.5	4.5		3.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.0	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	19.5	27.0		16.0	23.5		14.0	44.8		10.7	40.0	
Actuated g/C Ratio	0.16	0.23		0.13	0.20		0.12	0.37		0.09	0.33	
v/c Ratio	1.54	1.18		0.71	0.98		1.15	1.03		0.62	0.77	
Control Delay (s/veh)	294.6	135.2		66.4	75.7		156.2	71.4		69.9	39.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	294.6	135.2		66.4	75.7		156.2	71.4		69.9	39.8	
LOS	F	F		E	E		F	E		E	D	
Approach Delay (s/veh)		186.3			73.8			84.0			42.7	
Approach LOS		F			E			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.54			
Intersection Signal Delay (s/veh): 103.0		Intersection LOS: F	
Intersection Capacity Utilization 98.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 8: SH 35 & Magnoila Parkway



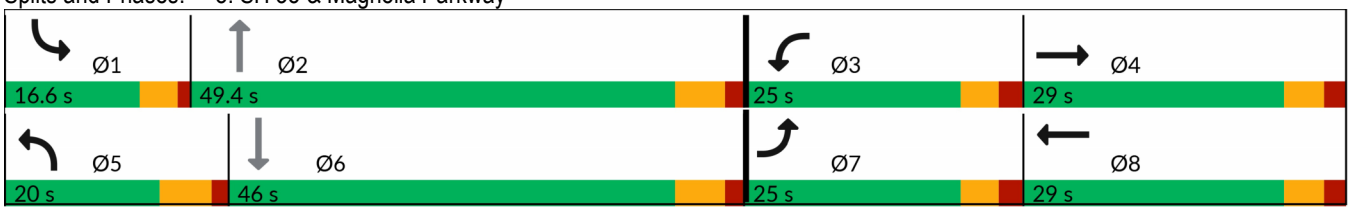


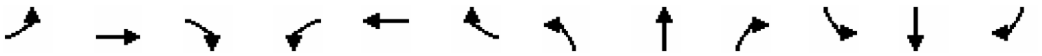
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	263	588	218	184	856	73	256	856	99	170	927	321
Future Volume (vph)	263	588	218	184	856	73	256	856	99	170	927	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		0	380		0	180		0	180		160
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.959			0.988			0.984			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3394	0	1770	3497	0	1770	3483	0	1770	3401	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3394	0	1770	3497	0	1770	3483	0	1770	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			7			12			43	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4203			1078			2138			5584	
Travel Time (s)		95.5			24.5			48.6			126.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	286	639	237	200	930	79	278	930	108	185	1008	349
Shared Lane Traffic (%)												
Lane Group Flow (vph)	286	876	0	200	1009	0	278	1038	0	185	1357	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5			1		
Permitted Phases								2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		20.0	45.0		9.5	45.0	
Total Split (s)	25.0	29.0		25.0	29.0		20.0	49.4		16.6	46.0	
Total Split (%)	20.8%	24.2%		20.8%	24.2%		16.7%	41.2%		13.8%	38.3%	
Maximum Green (s)	19.5	23.5		19.5	23.5		14.0	43.4		12.1	40.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		4.5	4.5		3.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.0	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	19.5	25.7		17.3	23.5		14.0	43.4		12.1	40.0	
Actuated g/C Ratio	0.16	0.21		0.14	0.20		0.12	0.36		0.10	0.33	
v/c Ratio	1.00	1.16		0.79	1.46		1.35	0.82		1.04	1.17	
Control Delay (s/veh)	102.9	125.7		70.8	251.3		226.5	40.8		130.6	120.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	102.9	125.7		70.8	251.3		226.5	40.8		130.6	120.7	
LOS	F	F		E	F		F	D		F	F	
Approach Delay (s/veh)		120.1			221.4			80.0			121.9	
Approach LOS		F			F			E			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.46			
Intersection Signal Delay (s/veh): 134.0		Intersection LOS: F	
Intersection Capacity Utilization 109.8%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 8: SH 35 & Magnoila Parkway



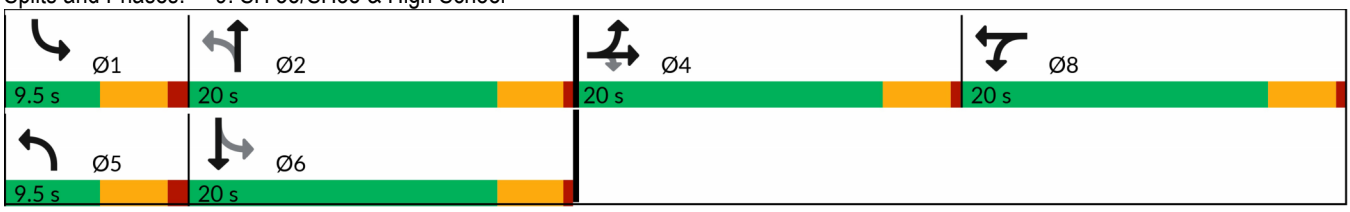


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	4	0	19	16	110	0	1397	53	238	703	40
Future Volume (vph)	1	4	0	19	16	110	0	1397	53	238	703	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt					0.897			0.994			0.992	
Flt Protected		0.990			0.993					0.950		
Satd. Flow (prot)	0	1844	1863	0	1659	0	1863	3518	0	1770	3511	0
Flt Permitted		0.990			0.993					0.181		
Satd. Flow (perm)	0	1844	1863	0	1659	0	1863	3518	0	337	3511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					120			5			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		688			655			2138			2138	
Travel Time (s)		15.6			14.9			48.6			48.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	4	0	21	17	120	0	1518	58	259	764	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	5	0	0	158	0	0	1576	0	259	807	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	0	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (%)	28.8%	28.8%	28.8%	28.8%	28.8%		13.7%	28.8%		13.7%	28.8%	
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0		5.0	16.0		5.0	16.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)		5.8			7.0			17.4		26.7	28.1	
Actuated g/C Ratio		0.14			0.17			0.42		0.64	0.68	
v/c Ratio		0.02			0.42			1.07		0.66	0.34	
Control Delay (s/veh)		19.0			10.3			63.3		19.5	5.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay (s/veh)		19.0			10.3			63.3		19.5	5.5	
LOS		B			B			E		B	A	
Approach Delay (s/veh)		19.0			10.3			63.3			8.9	
Approach LOS		B			B			E			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 69.5			
Actuated Cycle Length: 41.6			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay (s/veh): 39.6		Intersection LOS: D	
Intersection Capacity Utilization 79.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: SH 35/SH35 & High School

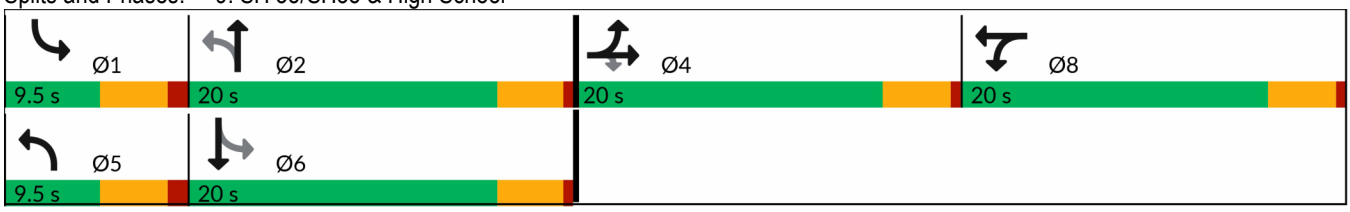


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	21	3	31	0	71	0	1230	44	145	1316	1
Future Volume (vph)	37	21	3	31	0	71	0	1230	44	145	1316	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.906			0.995				
Flt Protected		0.969			0.985					0.950		
Satd. Flow (prot)	0	1805	1583	0	1662	0	1863	3522	0	1770	3539	0
Flt Permitted		0.969			0.985					0.161		
Satd. Flow (perm)	0	1805	1583	0	1662	0	1863	3522	0	300	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149		149			5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		688			655			2138			2138	
Travel Time (s)		15.6			14.9			48.6			48.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	23	3	34	0	77	0	1337	48	158	1430	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	3	0	111	0	0	1385	0	158	1431	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	0	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (%)	28.8%	28.8%	28.8%	28.8%	28.8%		13.7%	28.8%		13.7%	28.8%	
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0		5.0	16.0		5.0	16.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)		7.2	7.2		6.0			21.5		27.2	28.8	
Actuated g/C Ratio		0.16	0.16		0.13			0.47		0.59	0.63	
v/c Ratio		0.22	0.01		0.32			0.84		0.46	0.65	
Control Delay (s/veh)		21.1	0.0		5.5			28.1		13.0	11.5	
Queue Delay		0.0	0.0		0.0			0.0		0.0	0.0	
Total Delay (s/veh)		21.1	0.0		5.5			28.1		13.0	11.5	
LOS		C	A		A			C		B	B	
Approach Delay (s/veh)		20.1			5.5			28.1			11.7	
Approach LOS		C			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 69.5			
Actuated Cycle Length: 45.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 18.9		Intersection LOS: B	
Intersection Capacity Utilization 66.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 9: SH 35/SH35 & High School

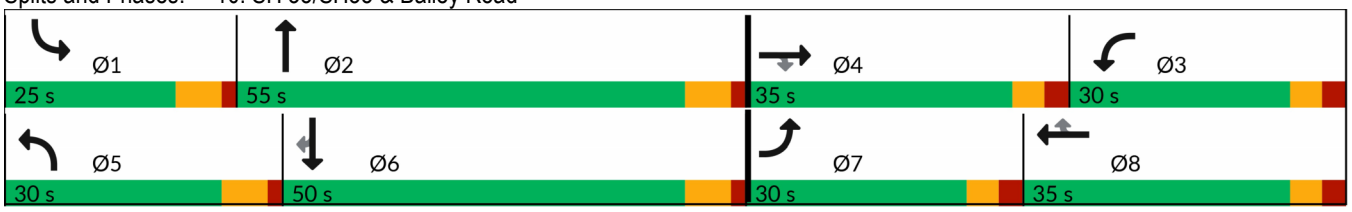


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	502	419	38	278	102	280	759	25	150	517	158
Future Volume (vph)	225	502	419	38	278	102	280	759	25	150	517	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	2		0	1		1
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3522	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	3433	3522	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			344			120		2				144
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		782			1587			6422			2138	
Travel Time (s)		17.8			36.1			146.0			48.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	245	546	455	41	302	111	304	825	27	163	562	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	245	546	455	41	302	111	304	852	0	163	562	172
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		42			42			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2	0	1	2		1	2	0
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100	0	20	100		20	100	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	0	20	6	0	20	6		20	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	12.0		5.0	12.0	12.0
Minimum Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	20.0	50.0		25.0	50.0	50.0
Total Split (s)	30.0	35.0	35.0	30.0	35.0	35.0	30.0	55.0		25.0	50.0	50.0
Total Split (%)	20.7%	24.1%	24.1%	20.7%	24.1%	24.1%	20.7%	37.9%		17.2%	34.5%	34.5%
Maximum Green (s)	24.0	29.0	29.0	24.0	29.0	29.0	23.5	48.5		18.5	43.5	43.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.5	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max		None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	0
Act Effct Green (s)	21.6	29.3	29.3	11.6	16.6	16.6	16.6	48.8		16.0	48.1	48.1
Actuated g/C Ratio	0.17	0.23	0.23	0.09	0.13	0.13	0.13	0.38		0.12	0.38	0.38
v/c Ratio	0.82	0.68	0.73	0.26	0.66	0.36	0.68	0.63		0.74	0.42	0.25
Control Delay (s/veh)	74.5	51.6	19.9	59.3	60.9	10.6	62.2	36.3		75.3	32.4	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	74.5	51.6	19.9	59.3	60.9	10.6	62.2	36.3		75.3	32.4	8.5
LOS	E	D	B	E	E	B	E	D		E	C	A
Approach Delay (s/veh)		44.5			48.5			43.1			35.6	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 128.1			
Natural Cycle: 135			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 42.4		Intersection LOS: D	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 10: SH 35/SH35 & Bailey Road

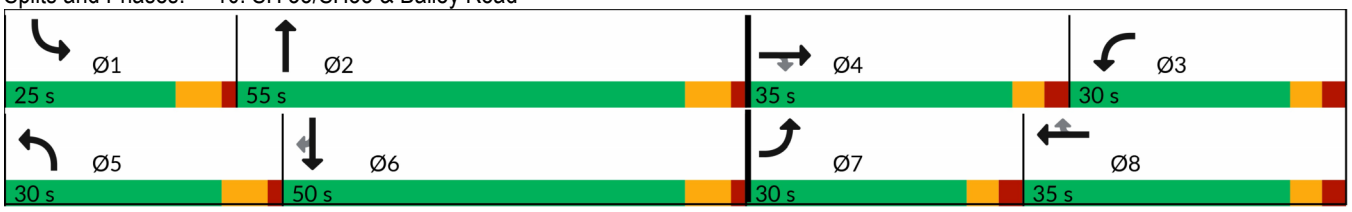


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	167	383	283	83	829	231	437	675	61	115	986	259
Future Volume (vph)	167	383	283	83	829	231	437	675	61	115	986	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	2		0	1		1
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.988				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3497	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	3433	3497	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			306			120		7				124
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		782			1587			6422			2138	
Travel Time (s)		17.8			36.1			146.0			48.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	182	416	308	90	901	251	475	734	66	125	1072	282
Shared Lane Traffic (%)												
Lane Group Flow (vph)	182	416	308	90	901	251	475	800	0	125	1072	282
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		42			42			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2	0	1	2		1	2	0
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100	0	20	100		20	100	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	0	20	6	0	20	6		20	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	12.0		5.0	12.0	12.0
Minimum Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	20.0	50.0		25.0	50.0	50.0
Total Split (s)	30.0	35.0	35.0	30.0	35.0	35.0	30.0	55.0		25.0	50.0	50.0
Total Split (%)	20.7%	24.1%	24.1%	20.7%	24.1%	24.1%	20.7%	37.9%		17.2%	34.5%	34.5%
Maximum Green (s)	24.0	29.0	29.0	24.0	29.0	29.0	23.5	48.5		18.5	43.5	43.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.5	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max		None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	0
Act Effct Green (s)	18.9	23.0	23.0	24.9	29.1	29.1	22.2	51.2		14.6	43.6	43.6
Actuated g/C Ratio	0.14	0.17	0.17	0.18	0.21	0.21	0.16	0.37		0.11	0.31	0.31
v/c Ratio	0.76	0.71	0.59	0.28	1.22	0.59	0.87	0.62		0.68	0.96	0.48
Control Delay (s/veh)	77.9	61.8	10.4	53.7	155.3	32.3	73.9	39.1		78.4	66.9	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	77.9	61.8	10.4	53.7	155.3	32.3	73.9	39.1		78.4	66.9	24.8
LOS	E	E	B	D	F	C	E	D		E	E	C
Approach Delay (s/veh)		47.5			123.1			52.1			59.8	
Approach LOS		D			F			D			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 138.8			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.22			
Intersection Signal Delay (s/veh): 71.6		Intersection LOS: E	
Intersection Capacity Utilization 92.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 10: SH 35/SH35 & Bailey Road

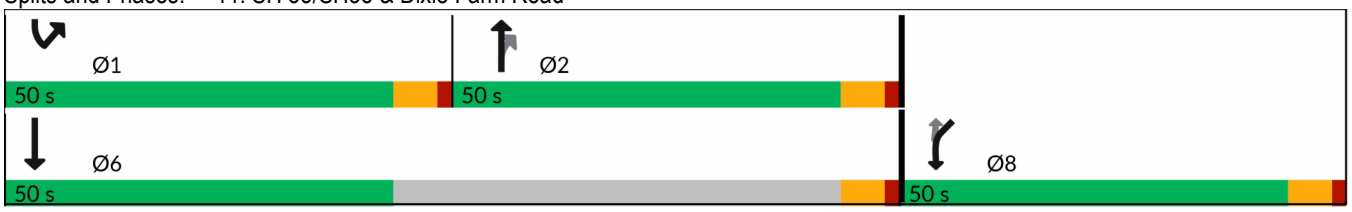


Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	919	876	346	536	493	292
Future Volume (vph)	919	876	346	536	493	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	320		180	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		428				317
Link Speed (mph)	30			30	30	
Link Distance (ft)	8103			6422	2765	
Travel Time (s)	184.2			146.0	62.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	999	952	376	583	536	317
Shared Lane Traffic (%)						
Lane Group Flow (vph)	999	952	376	583	536	317
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	0	1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100	0	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	0	20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0	15.0	5.0	15.0	5.0	5.0
Minimum Split (s)	45.0	45.0	30.0	45.0	30.0	30.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Maximum Green (s)	43.5	43.5	43.5	43.5	43.5	43.5
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	44.1	44.1	30.4	81.1	25.0	25.0
Actuated g/C Ratio	0.37	0.37	0.25	0.68	0.21	0.21
v/c Ratio	0.76	1.11	0.83	0.24	0.75	0.54
Control Delay (s/veh)	39.8	88.1	59.0	8.0	51.7	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.8	88.1	59.0	8.0	51.7	8.2
LOS	D	F	E	A	D	A
Approach Delay (s/veh)	63.4			28.0	35.5	
Approach LOS	E			C	D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 119.3			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay (s/veh): 48.0		Intersection LOS: D	
Intersection Capacity Utilization 84.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 11: SH 35/SH35 & Dixie Farm Road

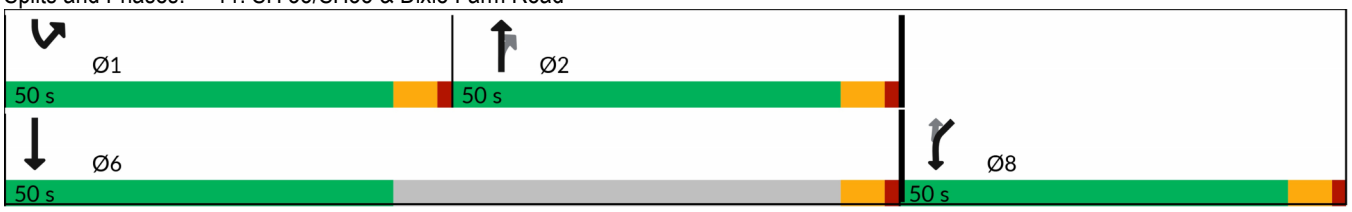


Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	770	699	345	1027	824	283
Future Volume (vph)	770	699	345	1027	824	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	320		180	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		408				248
Link Speed (mph)	30			30	30	
Link Distance (ft)	8103			6422	2765	
Travel Time (s)	184.2			146.0	62.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	837	760	375	1116	896	308
Shared Lane Traffic (%)						
Lane Group Flow (vph)	837	760	375	1116	896	308
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	0	1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100	0	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	0	20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0	15.0	5.0	15.0	5.0	5.0
Minimum Split (s)	45.0	45.0	30.0	45.0	30.0	30.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Maximum Green (s)	43.5	43.5	43.5	43.5	43.5	43.5
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	43.9	43.9	33.7	84.1	39.9	39.9
Actuated g/C Ratio	0.32	0.32	0.25	0.61	0.29	0.29
v/c Ratio	0.74	0.97	0.86	0.51	0.90	0.48
Control Delay (s/veh)	48.0	47.7	69.7	16.2	59.7	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.0	47.7	69.7	16.2	59.7	11.9
LOS	D	D	E	B	E	B
Approach Delay (s/veh)	47.9			29.7	47.4	
Approach LOS	D			C	D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 137.1			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 41.4		Intersection LOS: D	
Intersection Capacity Utilization 80.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: SH 35/SH35 & Dixie Farm Road



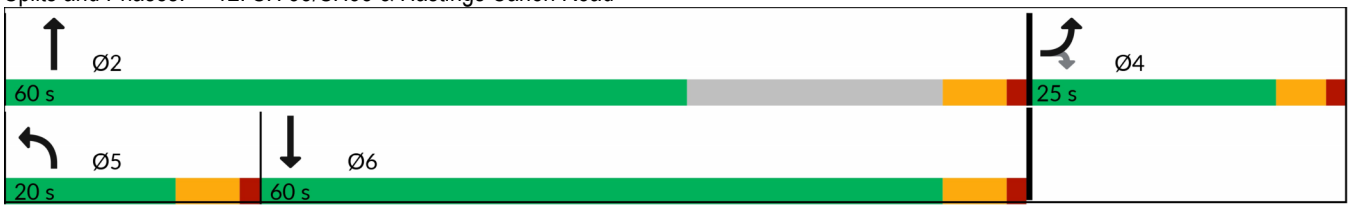


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	102	337	136	1699	1004	55
Future Volume (vph)	102	337	136	1699	1004	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	180			0
Storage Lanes	1	1	1			0
Taper Length (ft)	0		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.992	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3511	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3511	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		270			8	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1279			693	8103	
Travel Time (s)	29.1			15.8	184.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	366	148	1847	1091	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	366	148	1847	1151	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	0	1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (ft)	20	0	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	0	20	6	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	
Minimum Split (s)	25.0	25.0	20.0	60.0	60.0	
Total Split (s)	25.0	25.0	20.0	60.0	60.0	
Total Split (%)	23.8%	23.8%	19.0%	57.1%	57.1%	
Maximum Green (s)	19.5	19.5	13.5	53.5	53.5	
Yellow Time (s)	4.0	4.0	5.0	5.0	5.0	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	6.5	6.5	6.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	None	
Walk Time (s)	7.0	7.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	12.0	12.0	11.3	58.9	41.0	
Actuated g/C Ratio	0.14	0.14	0.14	0.71	0.49	
v/c Ratio	0.44	0.80	0.61	0.74	0.66	
Control Delay (s/veh)	39.0	24.2	47.7	10.2	18.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	39.0	24.2	47.7	10.2	18.9	
LOS	D	C	D	B	B	
Approach Delay (s/veh)	27.6			13.0	18.9	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 83.1			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay (s/veh): 16.8		Intersection LOS: B	
Intersection Capacity Utilization 62.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: SH 35/SH35 & Hastings Canon Road



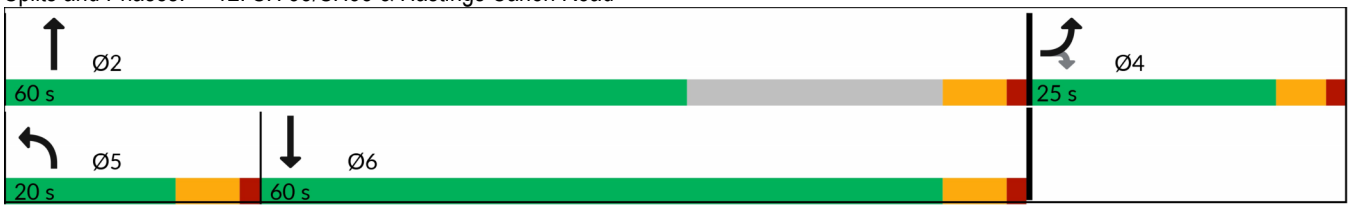


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	144	246	1348	1717	129
Future Volume (vph)	67	144	246	1348	1717	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	180			0
Storage Lanes	1	1	1			0
Taper Length (ft)	0		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.990	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3504	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3504	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		157			11	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1279			693	8103	
Travel Time (s)	29.1			15.8	184.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	73	157	267	1465	1866	140
Shared Lane Traffic (%)						
Lane Group Flow (vph)	73	157	267	1465	2006	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	0	1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (ft)	20	0	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	0	20	6	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	
Minimum Split (s)	25.0	25.0	20.0	60.0	60.0	
Total Split (s)	25.0	25.0	20.0	60.0	60.0	
Total Split (%)	23.8%	23.8%	19.0%	57.1%	57.1%	
Maximum Green (s)	19.5	19.5	13.5	53.5	53.5	
Yellow Time (s)	4.0	4.0	5.0	5.0	5.0	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	6.5	6.5	6.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	None	
Walk Time (s)	7.0	7.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	9.2	9.2	13.5	73.5	53.5	
Actuated g/C Ratio	0.10	0.10	0.14	0.78	0.56	
v/c Ratio	0.42	0.53	1.06	0.53	1.01	
Control Delay (s/veh)	47.8	13.6	114.8	5.1	45.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	47.8	13.6	114.8	5.1	45.0	
LOS	D	B	F	A	D	
Approach Delay (s/veh)	24.5			22.0	45.0	
Approach LOS	C			C	D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 94.8			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay (s/veh): 33.8		Intersection LOS: C	
Intersection Capacity Utilization 84.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 12: SH 35/SH35 & Hastings Canon Road

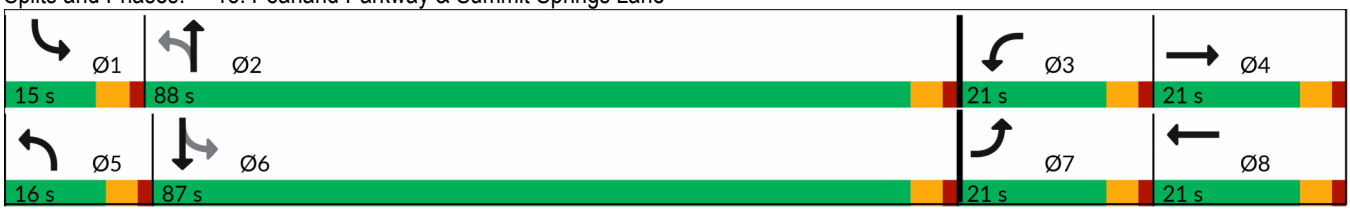


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	3	74	12	0	36	144	2158	9	10	1055	65
Future Volume (vph)	163	3	74	12	0	36	144	2158	9	10	1055	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	180		150	180		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.855			0.850			0.999			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1593	0	1770	1583	0	1770	3536	0	1770	3507	0
Flt Permitted	0.950			0.950			0.148			0.052		
Satd. Flow (perm)	1770	1593	0	1770	1583	0	276	3536	0	97	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		80			123						7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1005			878			1367			830	
Travel Time (s)		22.8			20.0			31.1			18.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	177	3	80	13	0	39	157	2346	10	11	1147	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	83	0	13	39	0	157	2356	0	11	1218	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		0	6		0	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex					Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		15.0	45.0		15.0	45.0	
Total Split (s)	21.0	21.0		21.0	21.0		16.0	88.0		15.0	87.0	
Total Split (%)	14.5%	14.5%		14.5%	14.5%		11.0%	60.7%		10.3%	60.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		11.0	83.0		10.0	82.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	15.5	20.8		8.1	8.1		87.5	83.5		79.4	73.6	
Actuated g/C Ratio	0.13	0.17		0.07	0.07		0.71	0.68		0.64	0.60	
v/c Ratio	0.79	0.25		0.11	0.18		0.51	0.98		0.08	0.58	
Control Delay (s/veh)	79.0	14.1		60.4	1.8		12.4	36.1		7.4	17.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	79.0	14.1		60.4	1.8		12.4	36.1		7.4	17.4	
LOS	E	B		E	A		B	D		A	B	
Approach Delay (s/veh)		58.3			16.5			34.6			17.3	
Approach LOS		E			B			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 123.3			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay (s/veh): 30.7		Intersection LOS: C	
Intersection Capacity Utilization 92.3%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 13: Pearland Parkway & Summit Springs Lane

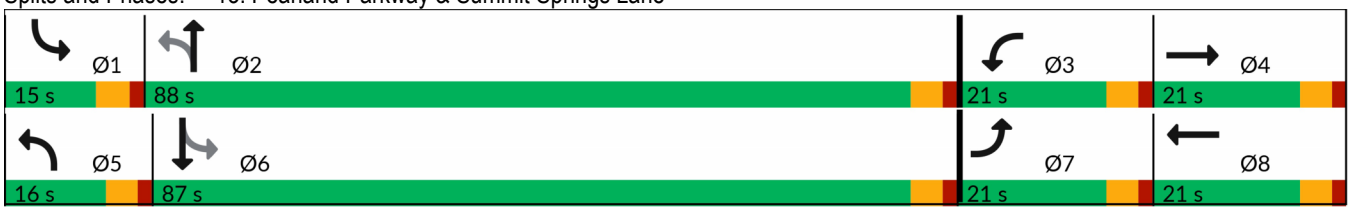


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	3	40	12	1	9	207	1184	13	19	2004	78
Future Volume (vph)	70	3	40	12	1	9	207	1184	13	19	2004	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	180		150	180		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.860			0.864			0.998			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1602	0	1770	1609	0	1770	3532	0	1770	3518	0
Flt Permitted	0.950			0.950			0.044			0.194		
Satd. Flow (perm)	1770	1602	0	1770	1609	0	82	3532	0	361	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			10			1			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1005			878			1367			830	
Travel Time (s)		22.8			20.0			31.1			18.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	3	43	13	1	10	225	1287	14	21	2178	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	46	0	13	11	0	225	1301	0	21	2263	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		0	6		0	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex					Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		15.0	45.0		15.0	45.0	
Total Split (s)	21.0	21.0		21.0	21.0		16.0	88.0		15.0	87.0	
Total Split (%)	14.5%	14.5%		14.5%	14.5%		11.0%	60.7%		10.3%	60.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		11.0	83.0		10.0	82.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	11.0	10.9		8.1	8.1		98.9	96.1		88.8	82.9	
Actuated g/C Ratio	0.09	0.09		0.07	0.07		0.81	0.79		0.73	0.68	
v/c Ratio	0.48	0.25		0.11	0.09		1.02	0.47		0.06	0.94	
Control Delay (s/veh)	65.3	20.8		61.0	33.2		103.1	8.3		5.2	29.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	65.3	20.8		61.0	33.2		103.1	8.3		5.2	29.5	
LOS	E	C		E	C		F	A		A	C	
Approach Delay (s/veh)		48.6			48.3			22.3			29.3	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 121.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay (s/veh): 27.3		Intersection LOS: C	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 13: Pearland Parkway & Summit Springs Lane



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	256	710	135	3	1267	135	300	126	19	201	221	648
Future Volume (vph)	256	710	135	3	1267	135	300	126	19	201	221	648
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		120	120		150	120		120	120		120
Storage Lanes	2		1	1		1	1		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95
Frt			0.850			0.850		0.980			0.888	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3468	0	3433	3143	0
Flt Permitted	0.066			0.354			0.950			0.950		
Satd. Flow (perm)	239	3539	1583	659	3539	1583	1770	3468	0	3433	3143	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			157			157		11			198	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		810			670			666			826	
Travel Time (s)		18.4			15.2			15.1			18.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	278	772	147	3	1377	147	326	137	21	218	240	704
Shared Lane Traffic (%)												
Lane Group Flow (vph)	278	772	147	3	1377	147	326	158	0	218	944	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0	0	0	0	0	0	2		0	2	
Detector Template	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	0	0	0	0	0	0	100		0	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	0	0	0	0	0	0	0	6		0	6	
Detector 1 Type								Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	25.0		25.0	25.0	
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	21.0	25.0		25.0	29.0	
Total Split (%)	16.0%	44.0%	44.0%	16.0%	44.0%	44.0%	16.8%	20.0%		20.0%	23.2%	
Maximum Green (s)	13.0	48.0	48.0	13.0	48.0	48.0	14.0	18.0		18.0	22.0	
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	None	
Walk Time (s)		5.0	5.0		5.0	5.0		5.0		5.0	5.0	
Flash Don't Walk (s)		11.0	11.0		11.0	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0		0	0	
Act Effct Green (s)	67.5	64.9	64.9	53.6	48.0	48.0	14.0	22.9		13.1	22.0	
Actuated g/C Ratio	0.54	0.52	0.52	0.43	0.39	0.39	0.11	0.18		0.11	0.18	
v/c Ratio	0.62	0.42	0.16	0.01	1.01	0.21	1.64	0.24		0.61	1.59dr	
Control Delay (s/veh)	28.7	19.8	2.9	14.0	65.0	3.9	344.3	42.5		60.2	183.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	28.7	19.8	2.9	14.0	65.0	3.9	344.3	42.5		60.2	183.7	
LOS	C	B	A	B	E	A	F	D		E	F	
Approach Delay (s/veh)		19.8			59.0			245.8			160.5	
Approach LOS		B			E			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 124.5			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.64			
Intersection Signal Delay (s/veh): 95.9		Intersection LOS: F	
Intersection Capacity Utilization 109.3%		ICU Level of Service H	
Analysis Period (min) 15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 14: Barry Rose Road/Hughes Road & Pearland Parkway

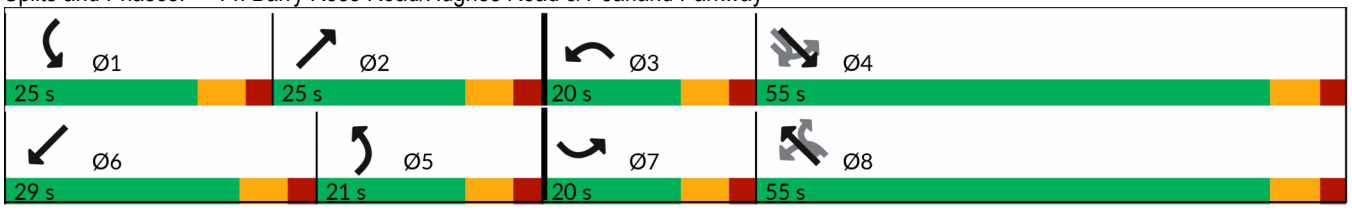


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	343	1335	258	40	962	451	201	333	38	397	332	263
Future Volume (vph)	343	1335	258	40	962	451	201	333	38	397	332	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		120	120		150	120		120	120		120
Storage Lanes	2		1	1		1	1		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95
Frt			0.850			0.850		0.985			0.934	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3486	0	3433	3306	0
Flt Permitted	0.096			0.092			0.950			0.950		
Satd. Flow (perm)	347	3539	1583	171	3539	1583	1770	3486	0	3433	3306	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			157			291		8			139	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		810			670			666			826	
Travel Time (s)		18.4			15.2			15.1			18.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	373	1451	280	43	1046	490	218	362	41	432	361	286
Shared Lane Traffic (%)												
Lane Group Flow (vph)	373	1451	280	43	1046	490	218	403	0	432	647	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0	0	0	0	0	0	2		0	2	
Detector Template	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	0	0	0	0	0	0	100		0	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	0	0	0	0	0	0	0	6		0	6	
Detector 1 Type								Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	25.0		25.0	25.0	
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	21.0	25.0		25.0	29.0	
Total Split (%)	16.0%	44.0%	44.0%	16.0%	44.0%	44.0%	16.8%	20.0%		20.0%	23.2%	
Maximum Green (s)	13.0	48.0	48.0	13.0	48.0	48.0	14.0	18.0		18.0	22.0	
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	None	
Walk Time (s)		5.0	5.0		5.0	5.0		5.0		5.0	5.0	
Flash Don't Walk (s)		11.0	11.0		11.0	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0		0	0	
Act Effct Green (s)	59.6	50.0	50.0	49.0	42.1	42.1	14.1	18.1		17.4	21.4	
Actuated g/C Ratio	0.51	0.43	0.43	0.42	0.36	0.36	0.12	0.15		0.15	0.18	
v/c Ratio	0.77	0.96	0.37	0.26	0.82	0.65	1.03	0.74		0.85	0.91	
Control Delay (s/veh)	33.1	50.3	11.8	18.5	40.7	16.4	121.5	57.0		66.5	55.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	33.1	50.3	11.8	18.5	40.7	16.4	121.5	57.0		66.5	55.1	
LOS	C	D	B	B	D	B	F	E		E	E	
Approach Delay (s/veh)		42.1			32.6			79.7			59.7	
Approach LOS		D			C			E			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 117.6			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay (s/veh): 47.2		Intersection LOS: D	
Intersection Capacity Utilization 93.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 14: Barry Rose Road/Hughes Road & Pearland Parkway

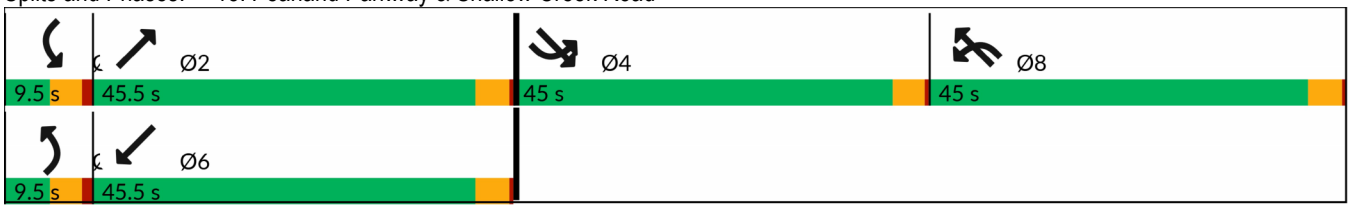


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	34	1	0	47	0	44	18	1245	44	13	801	59
Future Volume (vph)	34	1	0	47	0	44	18	1245	44	13	801	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	200		150	120		150
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt					0.927			0.995			0.990	
Flt Protected		0.954			0.975		0.950			0.950		
Satd. Flow (prot)	0	3376	0	0	3199	0	1770	3522	0	1770	3504	0
Flt Permitted		0.954			0.975		0.950			0.950		
Satd. Flow (perm)	0	3376	0	0	3199	0	1770	3522	0	1770	3504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					71			2			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		299			285			1148			332	
Travel Time (s)		6.8			6.5			26.1			7.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	1	0	51	0	48	20	1353	48	14	871	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	0	0	99	0	20	1401	0	14	935	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		0	0		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	20	0		20	0		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		9.5	45.0		9.5	45.0	
Total Split (s)	45.0	45.0		45.0	45.0		9.5	45.5		9.5	45.5	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		6.6%	31.4%		6.6%	31.4%	
Maximum Green (s)	41.0	41.0		41.0	41.0		5.0	41.5		5.0	41.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		6.3			6.3		5.0	49.6		5.0	49.6	
Actuated g/C Ratio		0.09			0.09		0.07	0.72		0.07	0.72	
v/c Ratio		0.12			0.28		0.16	0.55		0.11	0.37	
Control Delay (s/veh)		31.2			15.2		34.9	8.7		34.1	6.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		31.2			15.2		34.9	8.7		34.1	6.8	
LOS		C			B		C	A		C	A	
Approach Delay (s/veh)		31.2			15.2			9.0			7.2	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 68.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 8.9		Intersection LOS: A	
Intersection Capacity Utilization 51.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 15: Pearland Parkway & Shallow Creek Road



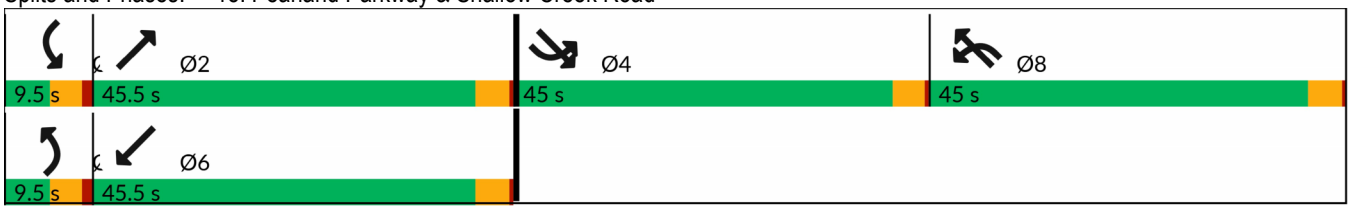
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	262	7	22	38	1	22	34	1206	10	56	1486	201
Future Volume (vph)	262	7	22	38	1	22	34	1206	10	56	1486	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	200		150	120		150
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.945			0.999			0.982	
Flt Protected		0.957			0.970		0.950			0.950		
Satd. Flow (prot)	0	3350	0	0	3244	0	1770	3536	0	1770	3476	0
Flt Permitted		0.957			0.970		0.950			0.950		
Satd. Flow (perm)	0	3350	0	0	3244	0	1770	3536	0	1770	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			24			1			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		299			285			1148			332	
Travel Time (s)		6.8			6.5			26.1			7.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	285	8	24	41	1	24	37	1311	11	61	1615	218
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	317	0	0	66	0	37	1322	0	61	1833	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		0	0		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	20	0		20	0		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		9.5	45.0		9.5	45.0	
Total Split (s)	45.0	45.0		45.0	45.0		9.5	45.5		9.5	45.5	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		6.6%	31.4%		6.6%	31.4%	
Maximum Green (s)	41.0	41.0		41.0	41.0		5.0	41.5		5.0	41.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		12.8			6.6		5.0	41.8		5.0	45.9	
Actuated g/C Ratio		0.16			0.08		0.06	0.52		0.06	0.57	
v/c Ratio		1.00dl			0.23		0.34	0.72		0.55	0.92	
Control Delay (s/veh)		36.3			27.7		47.1	19.0		59.4	29.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		36.3			27.7		47.1	19.0		59.4	29.0	
LOS		D			C		D	B		E	C	
Approach Delay (s/veh)		36.3			27.7			19.7			30.0	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 80.6			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay (s/veh): 26.7		Intersection LOS: C	
Intersection Capacity Utilization 75.3%		ICU Level of Service D	
Analysis Period (min) 15			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 15: Pearland Parkway & Shallow Creek Road

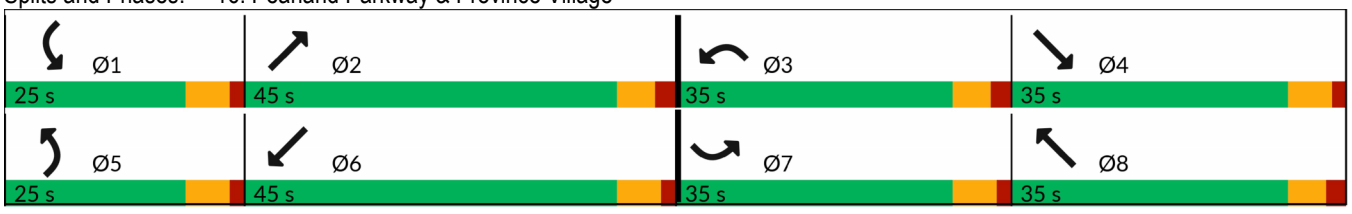


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	58	9	30	28	10	132	78	1045	28	43	870	34
Future Volume (vph)	58	9	30	28	10	132	78	1045	28	43	870	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		800	0		150	200		150	120		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	0			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.885			0.861			0.996			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1649	0	1770	1604	0	1770	3525	0	1770	3518	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1649	0	1770	1604	0	1770	3525	0	1770	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			143			2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		737			805			403			1148	
Travel Time (s)		16.8			18.3			9.2			26.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	10	33	30	11	143	85	1136	30	47	946	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	43	0	30	154	0	85	1166	0	47	983	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		0	6		0	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex					Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	5.0		3.0	5.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		25.0	35.0		25.0	35.0	
Total Split (s)	35.0	35.0		35.0	35.0		25.0	45.0		25.0	45.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		17.9%	32.1%		17.9%	32.1%	
Maximum Green (s)	29.0	29.0		29.0	29.0		19.0	39.0		19.0	39.0	
Yellow Time (s)	4.5	4.5		4.0	4.0		4.5	4.0		4.5	4.5	
All-Red Time (s)	1.5	1.5		2.0	2.0		1.5	2.0		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		Max	Max		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	9.3	9.2		29.6	29.6		10.6	41.8		8.4	39.8	
Actuated g/C Ratio	0.09	0.09		0.28	0.28		0.10	0.39		0.08	0.37	
v/c Ratio	0.41	0.25		0.06	0.28		0.49	0.85		0.34	0.75	
Control Delay (s/veh)	57.7	24.8		34.0	8.7		58.1	39.2		57.1	36.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	57.7	24.8		34.0	8.7		58.1	39.2		57.1	36.3	
LOS	E	C		C	A		E	D		E	D	
Approach Delay (s/veh)		44.4			12.8			40.4			37.3	
Approach LOS		D			B			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 107.3			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 37.4		Intersection LOS: D	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Pearland Parkway & Province Village

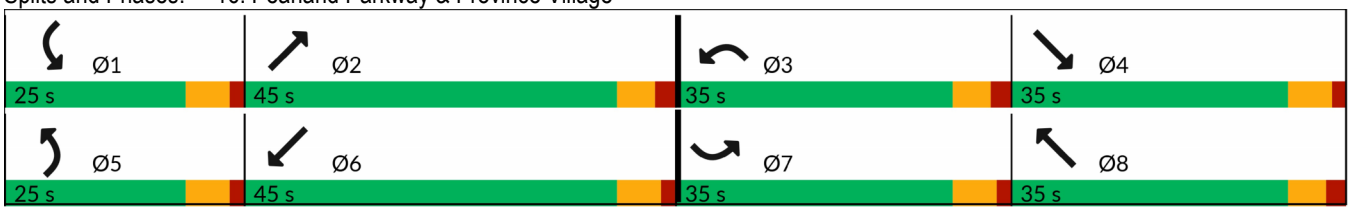


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	244	27	147	77	21	147	241	925	49	110	1374	70
Future Volume (vph)	244	27	147	77	21	147	241	925	49	110	1374	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		800	0		150	200		150	120		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	0			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.873			0.869			0.992			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1626	0	1770	1619	0	1770	3511	0	1770	3514	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1626	0	1770	1619	0	1770	3511	0	1770	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		160			160			4			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		737			805			403			1148	
Travel Time (s)		16.8			18.3			9.2			26.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	265	29	160	84	23	160	262	1005	53	120	1493	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	265	189	0	84	183	0	262	1058	0	120	1569	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		0	6		0	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex					Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	5.0		3.0	5.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		25.0	35.0		25.0	35.0	
Total Split (s)	35.0	35.0		35.0	35.0		25.0	45.0		25.0	45.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		17.9%	32.1%		17.9%	32.1%	
Maximum Green (s)	29.0	29.0		29.0	29.0		19.0	39.0		19.0	39.0	
Yellow Time (s)	4.5	4.5		4.0	4.0		4.5	4.0		4.5	4.5	
All-Red Time (s)	1.5	1.5		2.0	2.0		1.5	2.0		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		Max	Max		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	24.3	24.3		29.0	29.0		19.0	43.9		14.2	39.0	
Actuated g/C Ratio	0.18	0.18		0.21	0.21		0.14	0.32		0.10	0.29	
v/c Ratio	0.84	0.45		0.22	0.39		1.06	0.93		0.65	1.55	
Control Delay (s/veh)	76.0	14.1		46.9	12.3		127.3	59.0		74.7	284.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	76.0	14.1		46.9	12.3		127.3	59.0		74.7	284.0	
LOS	E	B		D	B		F	E		E	F	
Approach Delay (s/veh)		50.2			23.2			72.6			269.2	
Approach LOS		D			C			E			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 135.4			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.55			
Intersection Signal Delay (s/veh): 155.3		Intersection LOS: F	
Intersection Capacity Utilization 97.3%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 16: Pearland Parkway & Province Village

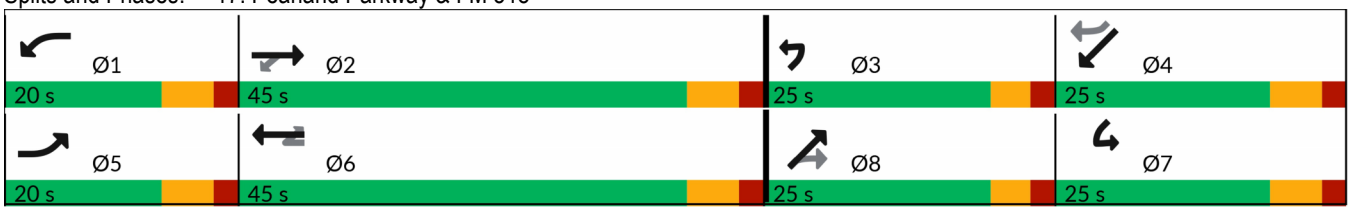


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Future Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		150	150		150	120		150	450		150
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			147			221			157			147
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1215			1637			473			570	
Travel Time (s)		27.6			37.2			10.8			13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	147	1176	154	203	1374	486	212	633	161	409	472	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	1176	154	203	1374	486	212	633	161	409	472	120
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2	0	0	2	0	0	0	0	0	0	0
Detector Template	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru
Leading Detector (ft)	0	100	0	0	100	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	0	6	0	0	6	0	0	0	0	0	0	0
Detector 1 Type		Cl+Ex			Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0	10.0	3.0	10.0	10.0	5.0	5.0	5.0	7.0	7.0	7.0
Minimum Split (s)	20.0	45.0	45.0	20.0	45.0	45.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	20.0	45.0	45.0	20.0	45.0	45.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	17.4%	39.1%	39.1%	17.4%	39.1%	39.1%	21.7%	21.7%	21.7%	21.7%	21.7%	21.7%
Maximum Green (s)	13.5	38.5	38.5	13.5	38.5	38.5	19.5	19.5	19.5	18.5	18.5	18.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	5.5	5.5	5.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	Max	None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Don't Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	12.6	38.5	38.5	13.5	39.4	39.4	19.5	19.5	19.5	17.9	17.9	17.9
Actuated g/C Ratio	0.11	0.34	0.34	0.12	0.34	0.34	0.17	0.17	0.17	0.16	0.16	0.16
v/c Ratio	0.76	0.99	0.24	0.98	1.13	0.71	0.70	1.05	0.40	0.76	0.85	0.32
Control Delay (s/veh)	73.8	61.7	6.0	107.7	104.1	23.8	58.6	96.5	10.3	56.3	62.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.8	61.7	6.0	107.7	104.1	23.8	58.6	96.5	10.3	56.3	62.5	6.3
LOS	E	E	A	F	F	C	E	F	B	E	E	A
Approach Delay (s/veh)		57.1			85.6			74.7			53.2	
Approach LOS		E			F			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 114.4			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay (s/veh): 70.2		Intersection LOS: E	
Intersection Capacity Utilization 90.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 17: Pearland Parkway & FM 518

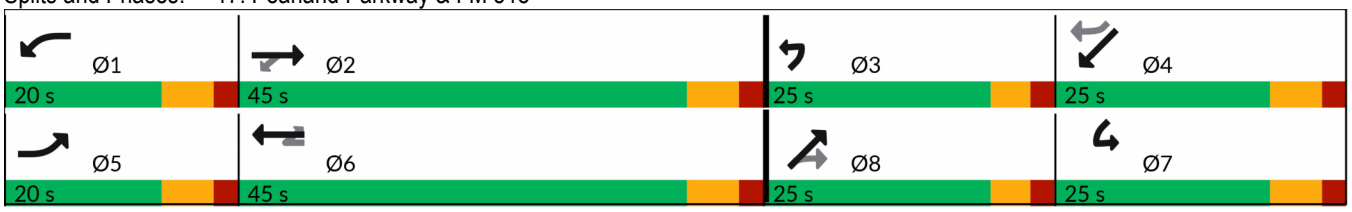


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Future Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		150	150		150	120		150	450		150
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			147			221			157			147
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1215			1637			473			570	
Travel Time (s)		27.6			37.2			10.8			13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	147	1176	154	203	1374	486	212	633	161	409	472	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	1176	154	203	1374	486	212	633	161	409	472	120
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2	0	0	2	0	0	0	0	0	0	0
Detector Template	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru
Leading Detector (ft)	0	100	0	0	100	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	0	6	0	0	6	0	0	0	0	0	0	0
Detector 1 Type		Cl+Ex			Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0	10.0	3.0	10.0	10.0	5.0	5.0	5.0	7.0	7.0	7.0
Minimum Split (s)	20.0	45.0	45.0	20.0	45.0	45.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	20.0	45.0	45.0	20.0	45.0	45.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	17.4%	39.1%	39.1%	17.4%	39.1%	39.1%	21.7%	21.7%	21.7%	21.7%	21.7%	21.7%
Maximum Green (s)	13.5	38.5	38.5	13.5	38.5	38.5	19.5	19.5	19.5	18.5	18.5	18.5
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	3.5	3.5	3.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	5.5	5.5	5.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	Max	None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Don't Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	12.6	38.5	38.5	13.5	39.4	39.4	19.5	19.5	19.5	17.9	17.9	17.9
Actuated g/C Ratio	0.11	0.34	0.34	0.12	0.34	0.34	0.17	0.17	0.17	0.16	0.16	0.16
v/c Ratio	0.76	0.99	0.24	0.98	1.13	0.71	0.70	1.05	0.40	0.76	0.85	0.32
Control Delay (s/veh)	73.8	61.7	6.0	107.7	104.1	23.8	58.6	96.5	10.3	56.3	62.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.8	61.7	6.0	107.7	104.1	23.8	58.6	96.5	10.3	56.3	62.5	6.3
LOS	E	E	A	F	F	C	E	F	B	E	E	A
Approach Delay (s/veh)		57.1			85.6			74.7			53.2	
Approach LOS		E			F			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 114.4			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay (s/veh): 70.2		Intersection LOS: E	
Intersection Capacity Utilization 90.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 17: Pearland Parkway & FM 518

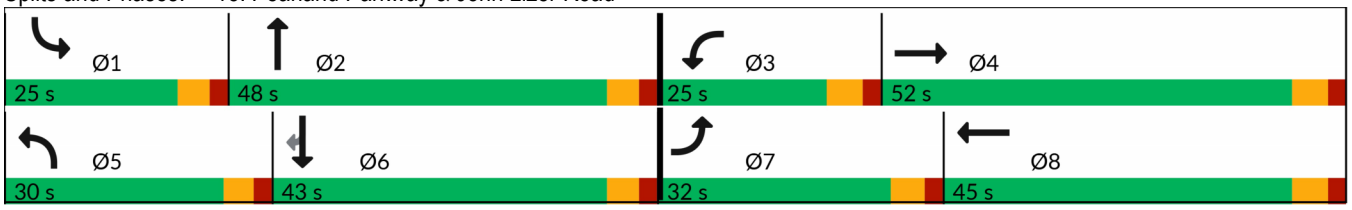


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	348	132	145	247	18	232	576	222	22	440	229
Future Volume (vph)	330	348	132	145	247	18	232	576	222	22	440	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		100	100		100	100		150
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.959			0.990			0.958				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3394	0	1770	3504	0	1770	3391	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3394	0	1770	3504	0	1770	3391	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			5			38				221
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1007			1264			3595			815	
Travel Time (s)		22.9			28.7			81.7			18.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	359	378	143	158	268	20	252	626	241	24	478	249
Shared Lane Traffic (%)												
Lane Group Flow (vph)	359	521	0	158	288	0	252	867	0	24	478	249
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			72			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		1	2		1	0		0	0	0
Detector Template	Thru	Thru		Left	Thru		Left	Thru		Thru	Thru	Thru
Leading Detector (ft)	0	100		20	100		20	0		0	0	0
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	0	6		20	6		20	0		0	0	0
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex					
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	30.0	45.0		25.0	45.0		30.0	30.0		25.0	25.0	25.0
Total Split (s)	32.0	52.0		25.0	45.0		30.0	48.0		25.0	43.0	43.0
Total Split (%)	21.3%	34.7%		16.7%	30.0%		20.0%	32.0%		16.7%	28.7%	28.7%
Maximum Green (s)	26.0	46.0		19.0	39.0		24.5	42.5		19.5	37.5	37.5
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	5.0
Flash Don't Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	26.4	26.6		14.9	15.2		21.2	39.4		7.1	20.1	20.1
Actuated g/C Ratio	0.25	0.25		0.14	0.14		0.20	0.37		0.07	0.19	0.19
v/c Ratio	0.82	0.59		0.63	0.57		0.71	0.68		0.20	0.71	0.52
Control Delay (s/veh)	56.3	37.3		57.0	47.2		53.3	31.5		55.1	47.5	11.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	56.3	37.3		57.0	47.2		53.3	31.5		55.1	47.5	11.9
LOS	E	D		E	D		D	C		E	D	B
Approach Delay (s/veh)		45.0			50.7			36.4			35.9	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 106.2			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 40.6		Intersection LOS: D	
Intersection Capacity Utilization 72.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 18: Pearland Parkway & John Lizer Road

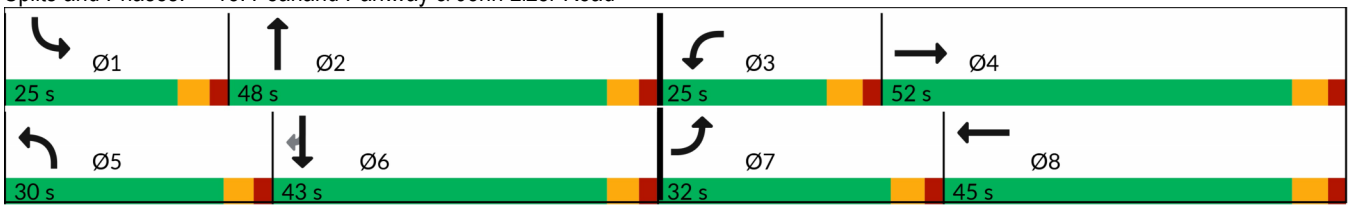


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	339	247	124	115	357	30	195	613	130	33	728	457
Future Volume (vph)	339	247	124	115	357	30	195	613	130	33	728	457
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		100	100		100	100		150
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.950			0.988			0.974				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3362	0	1770	3497	0	1770	3447	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3362	0	1770	3497	0	1770	3447	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			6			17				268
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1007			1264			3595			815	
Travel Time (s)		22.9			28.7			81.7			18.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	368	268	135	125	388	33	212	666	141	36	791	497
Shared Lane Traffic (%)												
Lane Group Flow (vph)	368	403	0	125	421	0	212	807	0	36	791	497
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			72			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		1	2		1	0		0	0	0
Detector Template	Thru	Thru		Left	Thru		Left	Thru		Thru	Thru	Thru
Leading Detector (ft)	0	100		20	100		20	0		0	0	0
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	0	6		20	6		20	0		0	0	0
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex					
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	30.0	45.0		25.0	45.0		30.0	30.0		25.0	25.0	25.0
Total Split (s)	32.0	52.0		25.0	45.0		30.0	48.0		25.0	43.0	43.0
Total Split (%)	21.3%	34.7%		16.7%	30.0%		20.0%	32.0%		16.7%	28.7%	28.7%
Maximum Green (s)	26.0	46.0		19.0	39.0		24.5	42.5		19.5	37.5	37.5
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	5.0
Flash Don't Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	26.3	33.0		14.0	20.6		19.7	50.2		8.0	33.1	33.1
Actuated g/C Ratio	0.21	0.27		0.11	0.17		0.16	0.41		0.06	0.27	0.27
v/c Ratio	0.97	0.43		0.63	0.71		0.75	0.57		0.31	0.83	0.80
Control Delay (s/veh)	89.6	34.7		68.1	55.9		67.5	31.0		65.9	51.7	30.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	89.6	34.7		68.1	55.9		67.5	31.0		65.9	51.7	30.2
LOS	F	C		E	E		E	C		E	D	C
Approach Delay (s/veh)		60.9			58.7			38.6			44.0	
Approach LOS		E			E			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 123.1			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 48.3		Intersection LOS: D	
Intersection Capacity Utilization 79.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 18: Pearland Parkway & John Lizer Road

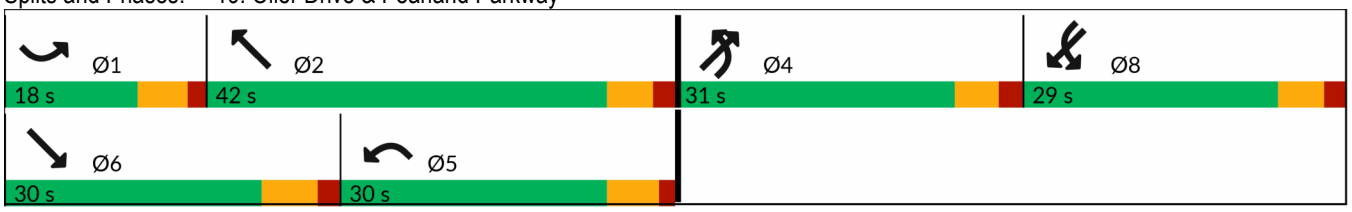


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	56	235	326	329	568	25	286	30	281	286	30	281
Future Volume (vph)	56	235	326	329	568	25	286	30	281	286	30	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	280		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.91	0.91	0.95
Frt		0.913			0.994			0.865			0.892	
Flt Protected	0.950			0.950			0.950			0.950	0.990	
Satd. Flow (prot)	1770	3231	0	1770	3518	0	1770	3061	0	1610	2994	0
Flt Permitted	0.950			0.950			0.950			0.950	0.990	
Satd. Flow (perm)	1770	3231	0	1770	3518	0	1770	3061	0	1610	2994	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		258			4			305			287	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3595			633			739			931	
Travel Time (s)		81.7			14.4			16.8			21.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	255	354	358	617	27	311	33	305	311	33	305
Shared Lane Traffic (%)										27%		
Lane Group Flow (vph)	61	609	0	358	644	0	311	338	0	227	422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		62			62			60			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	1	6		5	2		4	4		8	8	
Permitted Phases												

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	20.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	35.0		25.0	35.0		35.0	35.0		25.0	25.0	
Total Split (s)	18.0	30.0		30.0	42.0		31.0	31.0		29.0	29.0	
Total Split (%)	15.0%	25.0%		25.0%	35.0%		25.8%	25.8%		24.2%	24.2%	
Maximum Green (s)	12.0	23.0		24.0	36.0		25.0	25.0		23.0	23.0	
Yellow Time (s)	4.5	5.0		4.5	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	2.0		1.5	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	None		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	9.2	23.1		24.1	41.7		23.2	23.2		20.3	20.3	
Actuated g/C Ratio	0.08	0.20		0.21	0.36		0.20	0.20		0.18	0.18	
v/c Ratio	0.44	0.72		0.97	0.51		0.88	0.39		0.80	0.55	
Control Delay (s/veh)	61.7	30.4		87.7	33.1		70.8	7.9		67.9	16.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	61.7	30.4		87.7	33.1		70.8	7.9		67.9	16.7	
LOS	E	C		F	C		E	A		E	B	
Approach Delay (s/veh)		33.3			52.6			38.1			34.6	
Approach LOS		C			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 115.8			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 41.1		Intersection LOS: D	
Intersection Capacity Utilization 84.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 19: Oiler Drive & Pearland Parkway

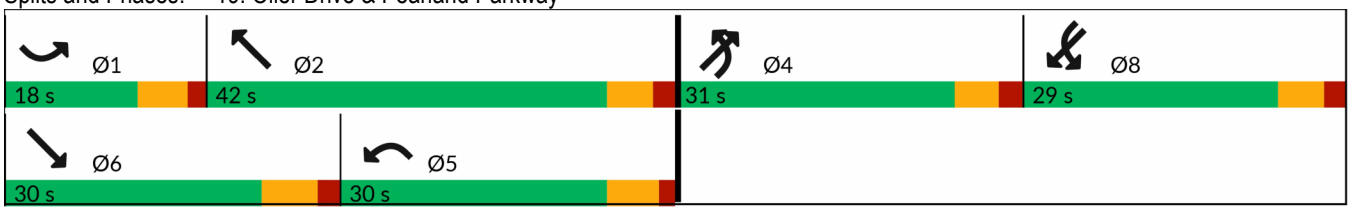


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	157	611	411	453	382	61	380	47	367	43	33	90
Future Volume (vph)	157	611	411	453	382	61	380	47	367	43	33	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	280		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.91	0.91	0.95
Frt		0.940			0.979			0.867			0.894	
Flt Protected	0.950			0.950			0.950			0.950	0.998	
Satd. Flow (prot)	1770	3327	0	1770	3465	0	1770	3068	0	1610	3025	0
Flt Permitted	0.950			0.950			0.950			0.950	0.998	
Satd. Flow (perm)	1770	3327	0	1770	3465	0	1770	3068	0	1610	3025	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		120			15			399			98	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3595			633			739			931	
Travel Time (s)		81.7			14.4			16.8			21.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	171	664	447	492	415	66	413	51	399	47	36	98
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	171	1111	0	492	481	0	413	450	0	42	139	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		62			62			60			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	1	6		5	2		4	4		8	8	
Permitted Phases												

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	20.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	35.0		25.0	35.0		35.0	35.0		25.0	25.0	
Total Split (s)	18.0	30.0		30.0	42.0		31.0	31.0		29.0	29.0	
Total Split (%)	15.0%	25.0%		25.0%	35.0%		25.8%	25.8%		24.2%	24.2%	
Maximum Green (s)	12.0	23.0		24.0	36.0		25.0	25.0		23.0	23.0	
Yellow Time (s)	4.5	5.0		4.5	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	2.0		1.5	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	None		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	12.0	23.0		24.0	36.0		25.0	25.0		8.2	8.2	
Actuated g/C Ratio	0.11	0.22		0.23	0.34		0.24	0.24		0.08	0.08	
v/c Ratio	0.85	1.35		1.22	0.40		0.98	0.44		0.34	0.43	
Control Delay (s/veh)	80.8	197.9		155.8	27.0		81.3	6.9		53.1	20.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	80.8	197.9		155.8	27.0		81.3	6.9		53.1	20.5	
LOS	F	F		F	C		F	A		D	C	
Approach Delay (s/veh)		182.3			92.1			42.5			28.1	
Approach LOS		F			F			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 105.2			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.35			
Intersection Signal Delay (s/veh): 110.7		Intersection LOS: F	
Intersection Capacity Utilization 101.2%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 19: Oiler Drive & Pearland Parkway



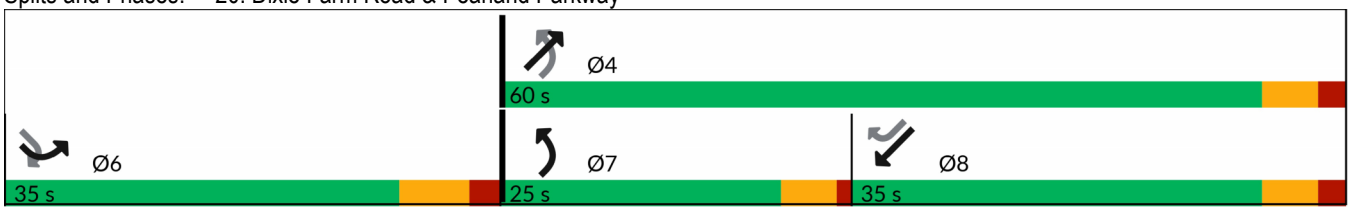


Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	515	86	139	1104	733	540
Future Volume (vph)	515	86	139	1104	733	540
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	250			150
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.175			
Satd. Flow (perm)	3433	1583	326	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		93				535
Link Speed (mph)	30			30	30	
Link Distance (ft)	884			1122	1114	
Travel Time (s)	20.1			25.5	25.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	560	93	151	1200	797	587
Shared Lane Traffic (%)						
Lane Group Flow (vph)	560	93	151	1200	797	587
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	54			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	0
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	0
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	6		7	4	8	
Permitted Phases		6	4			8

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Detector Phase	6	6	7	4	8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	5.0	15.0	5.0	5.0
Minimum Split (s)	35.0	35.0	25.0	35.0	35.0	35.0
Total Split (s)	35.0	35.0	25.0	60.0	35.0	35.0
Total Split (%)	36.8%	36.8%	26.3%	63.2%	36.8%	36.8%
Maximum Green (s)	28.0	28.0	20.0	54.0	29.0	29.0
Yellow Time (s)	5.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	5.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	28.1	28.1	42.6	41.6	26.9	26.9
Actuated g/C Ratio	0.34	0.34	0.51	0.50	0.32	0.32
v/c Ratio	0.48	0.16	0.45	0.67	0.69	0.67
Control Delay (s/veh)	24.1	5.8	14.8	17.5	28.0	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	24.1	5.8	14.8	17.5	28.0	7.6
LOS	C	A	B	B	C	A
Approach Delay (s/veh)	21.5			17.2	19.3	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 82.8			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 18.9		Intersection LOS: B	
Intersection Capacity Utilization 59.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Dixie Farm Road & Pearland Parkway

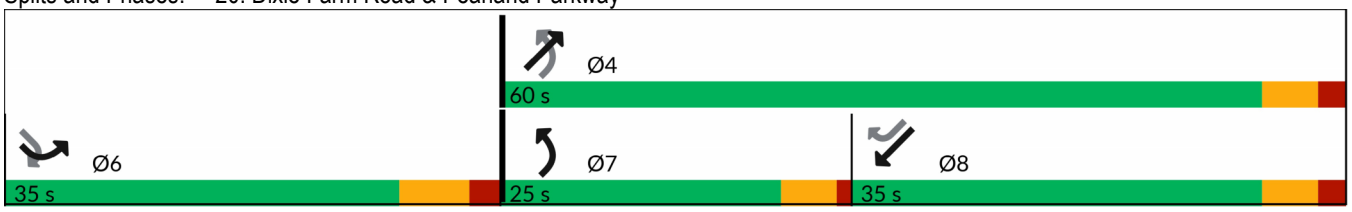


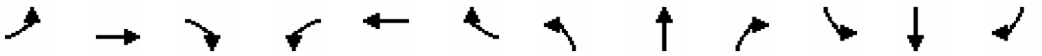
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	628	176	96	962	955	753
Future Volume (vph)	628	176	96	962	955	753
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	250			150
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.117			
Satd. Flow (perm)	3433	1583	218	3539	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		191				572
Link Speed (mph)	30			30	30	
Link Distance (ft)	884			1122	1114	
Travel Time (s)	20.1			25.5	25.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	683	191	104	1046	1038	818
Shared Lane Traffic (%)						
Lane Group Flow (vph)	683	191	104	1046	1038	818
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	54			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	0
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	0
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	6		7	4	8	
Permitted Phases		6	4			8

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Detector Phase	6	6	7	4	8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	5.0	15.0	5.0	5.0
Minimum Split (s)	35.0	35.0	25.0	35.0	35.0	35.0
Total Split (s)	35.0	35.0	25.0	60.0	35.0	35.0
Total Split (%)	36.8%	36.8%	26.3%	63.2%	36.8%	36.8%
Maximum Green (s)	28.0	28.0	20.0	54.0	29.0	29.0
Yellow Time (s)	5.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	5.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	None	None	None
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	28.2	28.2	41.2	40.2	29.2	29.2
Actuated g/C Ratio	0.35	0.35	0.51	0.49	0.36	0.36
v/c Ratio	0.58	0.28	0.38	0.60	0.82	0.88
Control Delay (s/veh)	25.0	4.6	14.3	16.3	31.4	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.0	4.6	14.3	16.3	31.4	20.3
LOS	C	A	B	B	C	C
Approach Delay (s/veh)	20.5			16.1	26.5	
Approach LOS	C			B	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 81.4			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 22.1		Intersection LOS: C	
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 20: Dixie Farm Road & Pearland Parkway



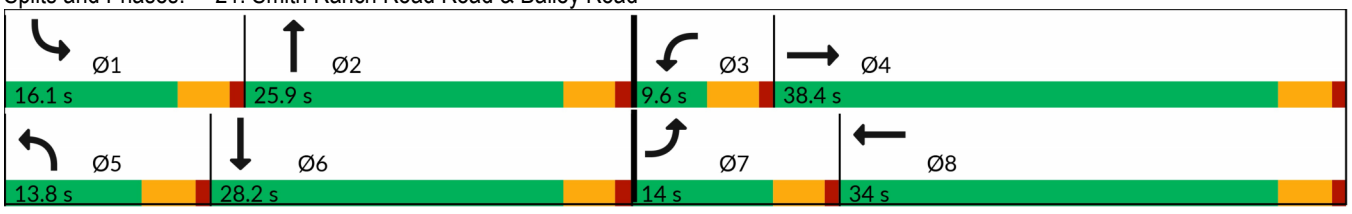


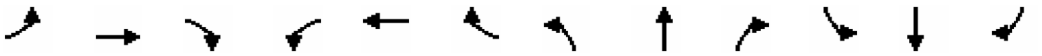
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	459	43	10	1251	44	187	24	10	58	15	163
Future Volume (vph)	135	459	43	10	1251	44	187	24	10	58	15	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	100		0	100		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.987			0.995			0.955			0.862	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3522	0	1770	3380	0	1770	3051	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3493	0	1770	3522	0	1770	3380	0	1770	3051	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			4			11			146	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		930			5111			1029			1098	
Travel Time (s)		21.1			116.2			23.4			25.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	147	499	47	11	1360	48	203	26	11	63	16	177
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	546	0	11	1408	0	203	37	0	63	193	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	14.0	38.4		9.6	34.0		13.8	25.9		16.1	28.2	
Total Split (%)	15.6%	42.7%		10.7%	37.8%		15.3%	28.8%		17.9%	31.3%	
Maximum Green (s)	9.5	33.9		5.1	29.5		9.3	21.4		11.6	23.7	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	9.4	41.5		5.1	29.5		9.3	26.5		8.6	23.7	
Actuated g/C Ratio	0.10	0.46		0.06	0.33		0.10	0.29		0.10	0.26	
v/c Ratio	0.80	0.34		0.11	1.22		1.12	0.04		0.38	0.21	
Control Delay (s/veh)	70.5	16.4		42.9	134.3		140.0	20.0		43.8	8.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	70.5	16.4		42.9	134.3		140.0	20.0		43.8	8.5	
LOS	E	B		D	F		F	B		D	A	
Approach Delay (s/veh)		27.9			133.6			121.5			17.2	
Approach LOS		C			F			F			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.22			
Intersection Signal Delay (s/veh): 92.9		Intersection LOS: F	
Intersection Capacity Utilization 74.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 21: Smith Ranch Road Road & Bailey Road



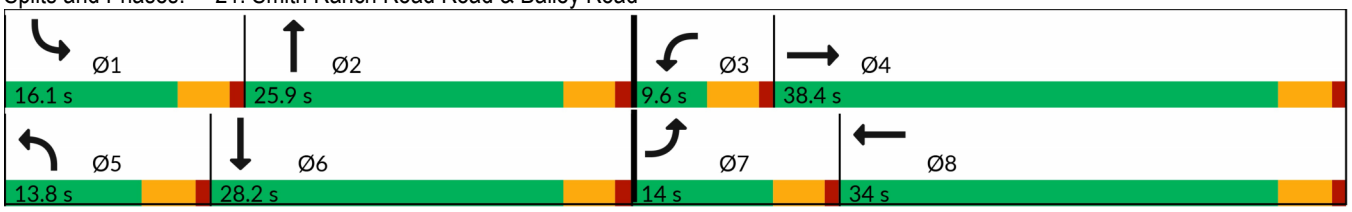


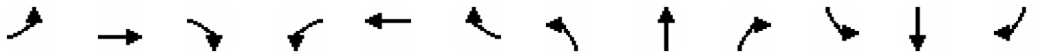
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	835	98	19	918	98	67	25	19	176	65	170
Future Volume (vph)	136	835	98	19	918	98	67	25	19	176	65	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	100		0	100		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.985			0.934			0.892	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3483	0	1770	3486	0	1770	3306	0	1770	3157	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3483	0	1770	3486	0	1770	3306	0	1770	3157	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			13			21			185	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		930			5111			1029			1098	
Travel Time (s)		21.1			116.2			23.4			25.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	148	908	107	21	998	107	73	27	21	191	71	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	1015	0	21	1105	0	73	48	0	191	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	14.0	38.4		9.6	34.0		13.8	25.9		16.1	28.2	
Total Split (%)	15.6%	42.7%		10.7%	37.8%		15.3%	28.8%		17.9%	31.3%	
Maximum Green (s)	9.5	33.9		5.1	29.5		9.3	21.4		11.6	23.7	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	9.4	39.6		5.1	29.5		8.2	21.4		11.4	26.7	
Actuated g/C Ratio	0.10	0.44		0.06	0.33		0.09	0.24		0.13	0.30	
v/c Ratio	0.80	0.66		0.21	0.96		0.45	0.06		0.85	0.24	
Control Delay (s/veh)	70.9	22.9		45.7	48.3		47.7	17.8		71.0	8.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	70.9	22.9		45.7	48.3		47.7	17.8		71.0	8.8	
LOS	E	C		D	D		D	B		E	A	
Approach Delay (s/veh)		29.0			48.2			35.8			35.4	
Approach LOS		C			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay (s/veh): 37.9		Intersection LOS: D	
Intersection Capacity Utilization 64.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 21: Smith Ranch Road Road & Bailey Road



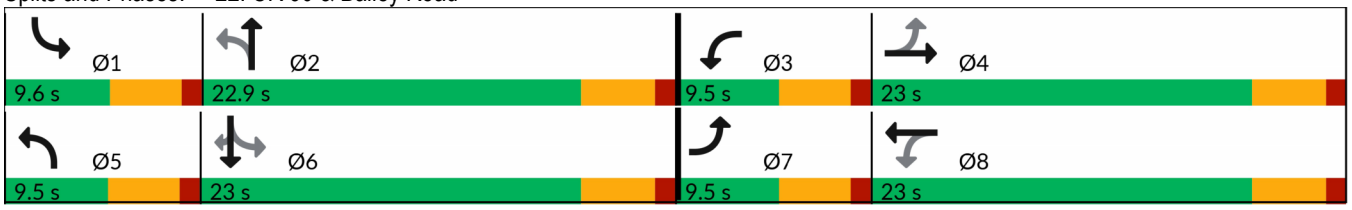


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	534	4	4	878	112	6	0	4	80	1	117
Future Volume (vph)	108	534	4	4	878	112	6	0	4	80	1	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	40		0	350		0	80		150	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.999			0.983			0.850			0.852	0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3536	0	1770	3479	0	1770	3008	0	1770	2888	1441
Flt Permitted	0.165			0.398			0.710			0.665		
Satd. Flow (perm)	307	3536	0	741	3479	0	1323	3008	0	1239	2888	1441
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			21			366			384	384
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5111			6249			1160			437	
Travel Time (s)		116.2			142.0			26.4			9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	117	580	4	4	954	122	7	0	4	87	1	127
Shared Lane Traffic (%)												50%
Lane Group Flow (vph)	117	584	0	4	1076	0	7	4	0	87	65	63
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	9.5	23.0		9.5	23.0		9.5	22.9		9.6	23.0	23.0
Total Split (%)	14.6%	35.4%		14.6%	35.4%		14.6%	35.2%		14.8%	35.4%	35.4%
Maximum Green (s)	5.0	18.5		5.0	18.5		5.0	18.4		5.1	18.5	18.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max		None	Max	Max
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	25.2	24.2		22.6	18.9		22.5	18.8		25.2	24.2	24.2
Actuated g/C Ratio	0.41	0.40		0.37	0.31		0.37	0.31		0.41	0.40	0.40
v/c Ratio	0.47	0.42		0.01	0.99		0.01	0.00		0.16	0.05	0.08
Control Delay (s/veh)	18.4	15.7		10.8	50.7		10.8	0.0		12.0	0.1	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	18.4	15.7		10.8	50.7		10.8	0.0		12.0	0.1	0.2
LOS	B	B		B	D		B	A		B	A	A
Approach Delay (s/veh)		16.1			50.5			6.9			4.9	
Approach LOS		B			D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 61.2			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay (s/veh): 33.4		Intersection LOS: C	
Intersection Capacity Utilization 56.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 22: CR 90 & Bailey Road

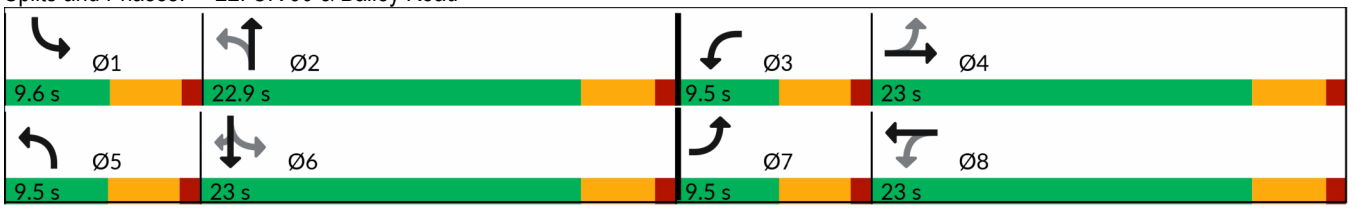


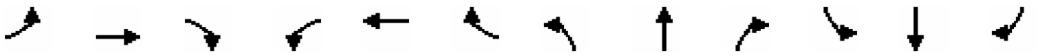
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	796	4	7	765	92	0	3	6	169	4	130
Future Volume (vph)	87	796	4	7	765	92	0	3	6	169	4	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	40		0	350		0	80		150	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.999			0.984			0.895			0.858	0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	3536	0	1770	3483	0	1863	3168	0	1770	2909	1441
Flt Permitted	0.166			0.217						0.604		
Satd. Flow (perm)	309	3536	0	404	3483	0	1863	3168	0	1125	2909	1441
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			20			279			396	396
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5111			6249			1160			437	
Travel Time (s)		116.2			142.0			26.4			9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	95	865	4	8	832	100	0	3	7	184	4	141
Shared Lane Traffic (%)												50%
Lane Group Flow (vph)	95	869	0	8	932	0	0	10	0	184	75	70
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	9.5	23.0		9.5	23.0		9.5	22.9		9.6	23.0	23.0
Total Split (%)	14.6%	35.4%		14.6%	35.4%		14.6%	35.2%		14.8%	35.4%	35.4%
Maximum Green (s)	5.0	18.5		5.0	18.5		5.0	18.4		5.1	18.5	18.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max		None	Max	Max
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	25.0	24.1		22.4	18.5			18.5		28.1	28.1	28.1
Actuated g/C Ratio	0.40	0.38		0.35	0.29			0.29		0.45	0.45	0.45
v/c Ratio	0.40	0.64		0.03	0.90			0.01		0.33	0.05	0.08
Control Delay (s/veh)	16.5	20.1		11.1	35.5			0.0		13.6	0.1	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Total Delay (s/veh)	16.5	20.1		11.1	35.5			0.0		13.6	0.1	0.2
LOS	B	C		B	D			A		B	A	A
Approach Delay (s/veh)		19.8			35.3						7.7	
Approach LOS		B			D						A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 63.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay (s/veh): 24.4		Intersection LOS: C	
Intersection Capacity Utilization 56.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 22: CR 90 & Bailey Road



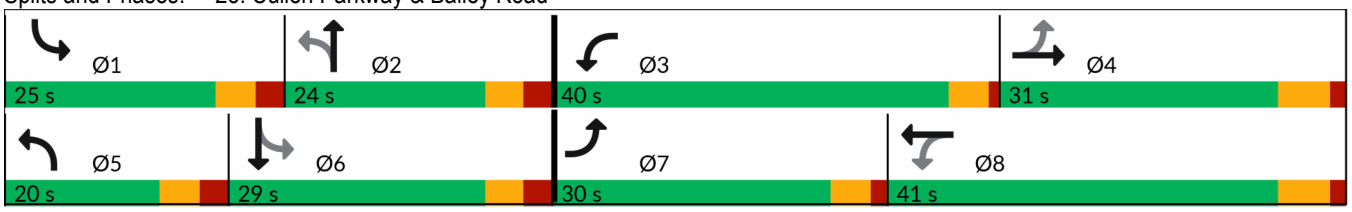


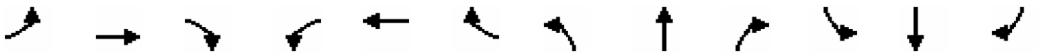
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	592	31	40	786	123	37	75	73	73	49	64
Future Volume (vph)	71	592	31	40	786	123	37	75	73	73	49	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.992			0.980			0.926			0.915	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3511	0	1770	3468	0	1770	3277	0	1770	3238	0
Flt Permitted	0.121			0.338			0.674			0.592		
Satd. Flow (perm)	225	3511	0	630	3468	0	1255	3277	0	1103	3238	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			15			79			70	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		6249			5290			1720			1280	
Travel Time (s)		142.0			120.2			39.1			29.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	643	34	43	854	134	40	82	79	79	53	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	677	0	43	988	0	40	161	0	79	123	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	30.0		40.0	40.0		20.0	24.0		25.0	25.0	
Total Split (s)	30.0	31.0		40.0	41.0		20.0	24.0		25.0	29.0	
Total Split (%)	25.0%	25.8%		33.3%	34.2%		16.7%	20.0%		20.8%	24.2%	
Maximum Green (s)	25.0	25.0		35.5	35.0		14.0	18.0		19.0	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.0	1.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		4.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	42.5	36.4		39.2	32.6		27.5	22.1		30.7	25.7	
Actuated g/C Ratio	0.48	0.41		0.44	0.37		0.31	0.25		0.35	0.29	
v/c Ratio	0.30	0.47		0.12	0.77		0.09	0.18		0.18	0.12	
Control Delay (s/veh)	15.3	21.5		12.7	30.4		20.7	17.8		21.5	15.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.3	21.5		12.7	30.4		20.7	17.8		21.5	15.1	
LOS	B	C		B	C		C	B		C	B	
Approach Delay (s/veh)		20.8			29.7			18.4			17.6	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 88.4			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 24.5		Intersection LOS: C	
Intersection Capacity Utilization 57.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 23: Cullen Parkway & Bailey Road



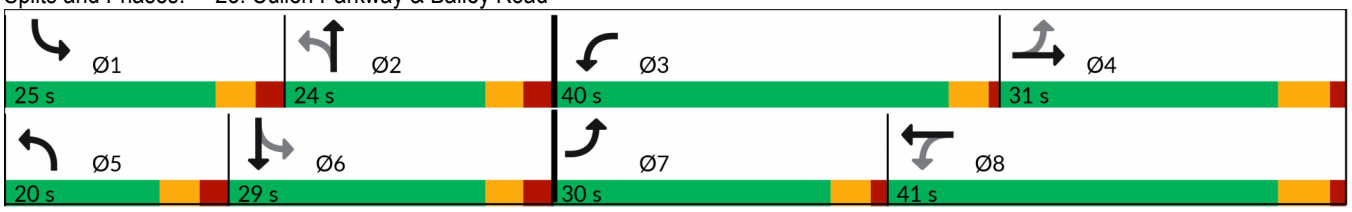


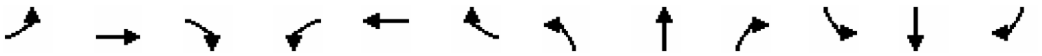
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	798	55	93	796	74	33	41	47	126	142	86
Future Volume (vph)	77	798	55	93	796	74	33	41	47	126	142	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.990			0.987			0.920			0.944	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3504	0	1770	3493	0	1770	3256	0	1770	3341	0
Flt Permitted	0.135			0.154			0.599			0.541		
Satd. Flow (perm)	251	3504	0	287	3493	0	1116	3256	0	1008	3341	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			8			51			93	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		6249			5290			1720			1280	
Travel Time (s)		142.0			120.2			39.1			29.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	84	867	60	101	865	80	36	45	51	137	154	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	927	0	101	945	0	36	96	0	137	247	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	30.0		40.0	40.0		20.0	24.0		25.0	25.0	
Total Split (s)	30.0	31.0		40.0	41.0		20.0	24.0		25.0	29.0	
Total Split (%)	25.0%	25.8%		33.3%	34.2%		16.7%	20.0%		20.8%	24.2%	
Maximum Green (s)	25.0	25.0		35.5	35.0		14.0	18.0		19.0	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.0	1.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		4.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	40.3	32.6		40.3	32.1		25.5	18.7		34.5	27.8	
Actuated g/C Ratio	0.45	0.36		0.45	0.36		0.28	0.21		0.38	0.31	
v/c Ratio	0.33	0.73		0.38	0.76		0.10	0.13		0.29	0.23	
Control Delay (s/veh)	16.1	29.7		16.7	30.9		21.0	18.8		22.1	18.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	16.1	29.7		16.7	30.9		21.0	18.8		22.1	18.2	
LOS	B	C		B	C		C	B		C	B	
Approach Delay (s/veh)		28.6			29.5			19.4			19.6	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 90.1			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 27.2		Intersection LOS: C	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 23: Cullen Parkway & Bailey Road





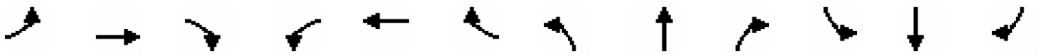
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	524	70	145	622	221	187	385	212	238	256	207
Future Volume (vph)	195	524	70	145	622	221	187	385	212	238	256	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	220		0	330		330	300		300
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.982			0.961			0.947			0.933	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3401	0	1770	3352	0	1770	3302	0
Flt Permitted	0.137			0.296			0.361			0.171		
Satd. Flow (perm)	255	3476	0	551	3401	0	672	3352	0	319	3302	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			43			85			167	
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		5290			5252			1738			1472	
Travel Time (s)		80.2			79.6			21.5			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	212	570	76	158	676	240	203	418	230	259	278	225
Shared Lane Traffic (%)												
Lane Group Flow (vph)	212	646	0	158	916	0	203	648	0	259	503	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	32.0		25.0	32.0		25.0	28.0		25.0	28.0	
Total Split (%)	22.7%	29.1%		22.7%	29.1%		22.7%	25.5%		22.7%	25.5%	
Maximum Green (s)	20.0	26.0		20.0	26.0		20.0	22.0		20.0	22.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	44.2	29.3		37.9	26.1		36.1	22.1		39.8	24.0	
Actuated g/C Ratio	0.45	0.30		0.38	0.26		0.36	0.22		0.40	0.24	
v/c Ratio	0.65	0.62		0.46	0.99		0.52	0.80		0.75	0.54	
Control Delay (s/veh)	28.5	33.6		21.3	62.9		24.0	41.0		35.7	24.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	28.5	33.6		21.3	62.9		24.0	41.0		35.7	24.8	
LOS	C	C		C	E		C	D		D	C	
Approach Delay (s/veh)		32.3			56.8			36.9			28.5	
Approach LOS		C			E			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 99.1			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay (s/veh): 40.0		Intersection LOS: D	
Intersection Capacity Utilization 84.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 24: Manvel Road Road & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	705	133	228	721	145	121	385	243	182	487	169
Future Volume (vph)	126	705	133	228	721	145	121	385	243	182	487	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	220		0	330		330	300		300
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.976			0.975			0.942			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3451	0	1770	3334	0	1770	3401	0
Flt Permitted	0.153			0.133			0.201			0.162		
Satd. Flow (perm)	285	3454	0	248	3451	0	374	3334	0	302	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			20			114			39	
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		5290			5252			1738			1472	
Travel Time (s)		80.2			79.6			21.5			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	137	766	145	248	784	158	132	418	264	198	529	184
Shared Lane Traffic (%)												
Lane Group Flow (vph)	137	911	0	248	942	0	132	682	0	198	713	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	32.0		25.0	32.0		25.0	28.0		25.0	28.0	
Total Split (%)	22.7%	29.1%		22.7%	29.1%		22.7%	25.5%		22.7%	25.5%	
Maximum Green (s)	20.0	26.0		20.0	26.0		20.0	22.0		20.0	22.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	37.2	26.1		44.9	30.0		33.3	22.1		38.6	24.8	
Actuated g/C Ratio	0.38	0.27		0.46	0.31		0.34	0.23		0.40	0.26	
v/c Ratio	0.52	0.97		0.74	0.87		0.48	0.81		0.63	0.80	
Control Delay (s/veh)	24.3	58.4		34.0	42.1		24.9	39.0		28.8	40.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.3	58.4		34.0	42.1		24.9	39.0		28.8	40.6	
LOS	C	E		C	D		C	D		C	D	
Approach Delay (s/veh)		53.9			40.4			36.7			38.0	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 97.2			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 42.7		Intersection LOS: D	
Intersection Capacity Utilization 83.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 24: Manvel Road Road & Bailey Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	841	12	12	787	181	41	59	25	192	25	133
Future Volume (vph)	124	841	12	12	787	181	41	59	25	192	25	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.998			0.972			0.955			0.874	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3532	0	1770	3440	0	1770	3380	0	1770	3093	0
Flt Permitted	0.098			0.268			0.643			0.558		
Satd. Flow (perm)	183	3532	0	499	3440	0	1198	3380	0	1039	3093	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			25			27			145	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5252			5253			1557			1503	
Travel Time (s)		119.4			119.4			35.4			34.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	135	914	13	13	855	197	45	64	27	209	27	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	135	927	0	13	1052	0	45	91	0	209	172	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	45.0		25.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	20.8%	37.5%		20.8%	37.5%		20.8%	20.8%		20.8%	20.8%	
Maximum Green (s)	20.0	39.0		20.0	39.0		20.0	19.0		20.0	19.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	54.0	50.9		43.5	36.6		27.4	19.2		39.4	28.6	
Actuated g/C Ratio	0.52	0.49		0.42	0.35		0.26	0.19		0.38	0.28	
v/c Ratio	0.50	0.53		0.05	0.85		0.13	0.14		0.42	0.18	
Control Delay (s/veh)	21.6	20.5		13.8	39.0		23.5	28.7		26.3	8.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	21.6	20.5		13.8	39.0		23.5	28.7		26.3	8.6	
LOS	C	C		B	D		C	C		C	A	
Approach Delay (s/veh)		20.6			38.7			27.0			18.3	
Approach LOS		C			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103.5			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 27.9		Intersection LOS: C	
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 25: Harkey Road & Bailey Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	981	27	22	987	187	15	21	25	155	68	99
Future Volume (vph)	77	981	27	22	987	187	15	21	25	155	68	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.996			0.976			0.919			0.911	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3525	0	1770	3454	0	1770	3253	0	1770	3224	0
Flt Permitted	0.088			0.150			0.637			0.591		
Satd. Flow (perm)	164	3525	0	279	3454	0	1187	3253	0	1101	3224	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			19			27			108	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5252			5253			1557			1503	
Travel Time (s)		119.4			119.4			35.4			34.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	84	1066	29	24	1073	203	16	23	27	168	74	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	1095	0	24	1276	0	16	50	0	168	182	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	45.0		25.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	20.8%	37.5%		20.8%	37.5%		20.8%	20.8%		20.8%	20.8%	
Maximum Green (s)	20.0	39.0		20.0	39.0		20.0	19.0		20.0	19.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	50.2	45.5		45.2	39.3		26.3	19.1		37.1	31.7	
Actuated g/C Ratio	0.51	0.46		0.46	0.40		0.27	0.19		0.38	0.32	
v/c Ratio	0.38	0.67		0.11	0.92		0.05	0.08		0.34	0.16	
Control Delay (s/veh)	17.5	24.4		13.4	40.5		21.5	20.7		24.0	12.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	17.5	24.4		13.4	40.5		21.5	20.7		24.0	12.6	
LOS	B	C		B	D		C	C		C	B	
Approach Delay (s/veh)		23.9			40.0			20.9			18.0	
Approach LOS		C			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.2			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay (s/veh): 30.3		Intersection LOS: C	
Intersection Capacity Utilization 66.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 25: Harkey Road & Bailey Road

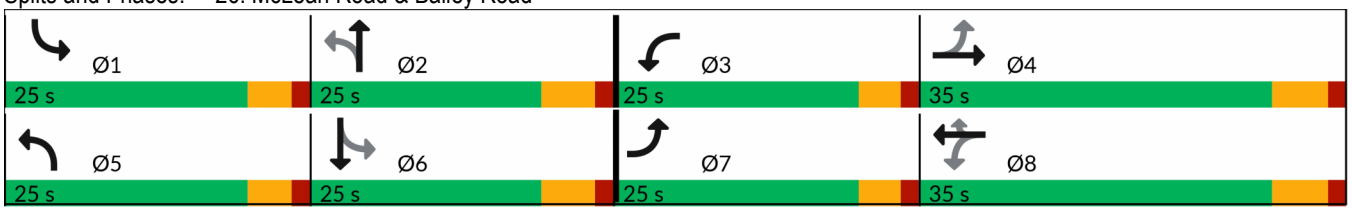


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	990	18	28	819	144	16	4	31	129	15	185
Future Volume (vph)	111	990	18	28	819	144	16	4	31	129	15	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	330		0	330		330	150		0	150		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.997			0.997	0.850		0.866			0.861	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3529	0	1770	3380	1441	1770	3065	0	1770	3047	0
Flt Permitted	0.111			0.129			0.616			0.596		
Satd. Flow (perm)	207	3529	0	240	3380	1441	1147	3065	0	1110	3047	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			1	141		490			201	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5253			2652			1736			277	
Travel Time (s)		119.4			60.3			39.5			6.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	1076	20	30	890	157	17	4	34	140	16	201
Shared Lane Traffic (%)						10%						
Lane Group Flow (vph)	121	1096	0	30	906	141	17	38	0	140	217	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	0	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (s)	25.0	35.0		25.0	35.0	35.0	25.0	25.0		25.0	25.0	
Total Split (%)	22.7%	31.8%		22.7%	31.8%	31.8%	22.7%	22.7%		22.7%	22.7%	
Maximum Green (s)	20.0	29.0		20.0	29.0	29.0	20.0	19.0		20.0	19.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		11.0			11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	43.7	36.5		36.4	29.1	29.1	26.1	19.0		35.2	29.7	
Actuated g/C Ratio	0.49	0.41		0.41	0.32	0.32	0.29	0.21		0.39	0.33	
v/c Ratio	0.46	0.76		0.15	0.83	0.25	0.05	0.04		0.27	0.19	
Control Delay (s/veh)	18.6	28.9		14.4	36.5	5.7	18.1	0.1		19.8	5.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	18.6	28.9		14.4	36.5	5.7	18.1	0.1		19.8	5.4	
LOS	B	C		B	D	A	B	A		B	A	
Approach Delay (s/veh)		27.9			31.8			5.6			11.1	
Approach LOS		C			C			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 89.6			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 26.8		Intersection LOS: C	
Intersection Capacity Utilization 60.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 26: McLean Road & Bailey Road

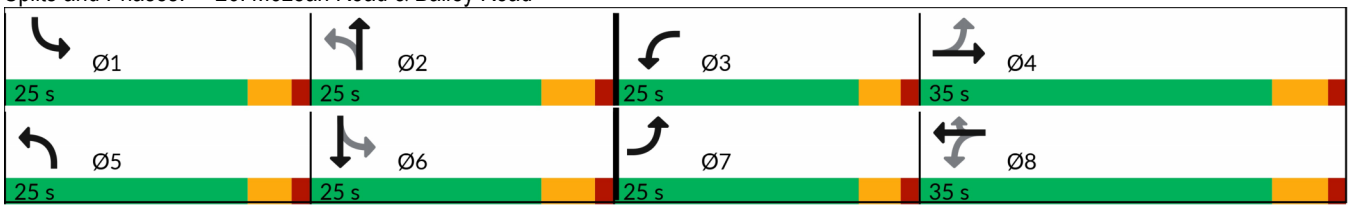


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	989	34	31	981	118	10	19	15	84	36	154
Future Volume (vph)	142	989	34	31	981	118	10	19	15	84	36	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	330		0	330		330	150		0	150		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.995			0.998	0.850		0.935			0.878	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3522	0	1770	3383	1441	1770	3309	0	1770	3107	0
Flt Permitted	0.110			0.142			0.623			0.597		
Satd. Flow (perm)	205	3522	0	265	3383	1441	1160	3309	0	1112	3107	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			1	129		16			167	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5253			2652			1736			277	
Travel Time (s)		119.4			60.3			39.5			6.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	154	1075	37	34	1066	128	11	21	16	91	39	167
Shared Lane Traffic (%)						10%						
Lane Group Flow (vph)	154	1112	0	34	1079	115	11	37	0	91	206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	0	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (s)	25.0	35.0		25.0	35.0	35.0	25.0	25.0		25.0	25.0	
Total Split (%)	22.7%	31.8%		22.7%	31.8%	31.8%	22.7%	22.7%		22.7%	22.7%	
Maximum Green (s)	20.0	29.0		20.0	29.0	29.0	20.0	19.0		20.0	19.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		11.0			11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	45.3	37.9		36.7	29.3	29.3	24.8	19.2		31.0	27.9	
Actuated g/C Ratio	0.52	0.44		0.42	0.34	0.34	0.29	0.22		0.36	0.32	
v/c Ratio	0.53	0.72		0.15	0.95	0.20	0.03	0.05		0.20	0.19	
Control Delay (s/veh)	20.2	26.0		13.6	47.0	4.7	18.7	20.3		20.0	6.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.2	26.0		13.6	47.0	4.7	18.7	20.3		20.0	6.9	
LOS	C	C		B	D	A	B	C		B	A	
Approach Delay (s/veh)		25.3			42.1			19.9			10.9	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.8			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay (s/veh): 31.0		Intersection LOS: C	
Intersection Capacity Utilization 62.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 26: McLean Road & Bailey Road

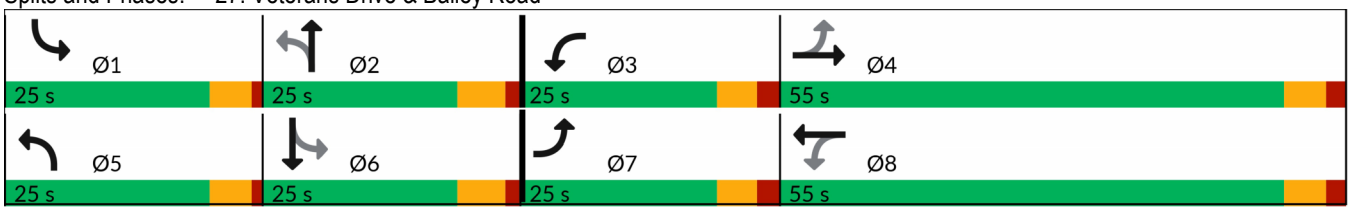


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	779	38	70	573	77	98	207	182	115	81	265
Future Volume (vph)	89	779	38	70	573	77	98	207	182	115	81	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		180	150		150	180		180	250		180
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.993			0.982			0.930			0.885	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3514	0	1770	3476	0	1770	3291	0	1770	3132	0
Flt Permitted	0.250			0.170			0.477			0.395		
Satd. Flow (perm)	466	3514	0	317	3476	0	889	3291	0	736	3132	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			13			143			288	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2652			5774			5367			662	
Travel Time (s)		60.3			131.2			122.0			15.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	97	847	41	76	623	84	107	225	198	125	88	288
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	888	0	76	707	0	107	423	0	125	376	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	12.0		3.0	12.0		3.0	10.0		3.0	12.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	55.0		25.0	55.0		25.0	25.0		25.0	25.0	
Total Split (%)	19.2%	42.3%		19.2%	42.3%		19.2%	19.2%		19.2%	19.2%	
Maximum Green (s)	19.0	49.0		19.0	49.0		20.0	19.0		20.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	37.1	30.2		35.2	29.3		30.5	19.7		31.7	20.4	
Actuated g/C Ratio	0.42	0.34		0.40	0.33		0.35	0.22		0.36	0.23	
v/c Ratio	0.30	0.74		0.30	0.61		0.27	0.50		0.33	0.40	
Control Delay (s/veh)	15.3	30.1		16.1	27.3		22.3	24.6		22.9	10.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.3	30.1		16.1	27.3		22.3	24.6		22.9	10.6	
LOS	B	C		B	C		C	C		C	B	
Approach Delay (s/veh)		28.7			26.2			24.1			13.6	
Approach LOS		C			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 88.4			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 24.4		Intersection LOS: C	
Intersection Capacity Utilization 63.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 27: Veterans Drive & Bailey Road

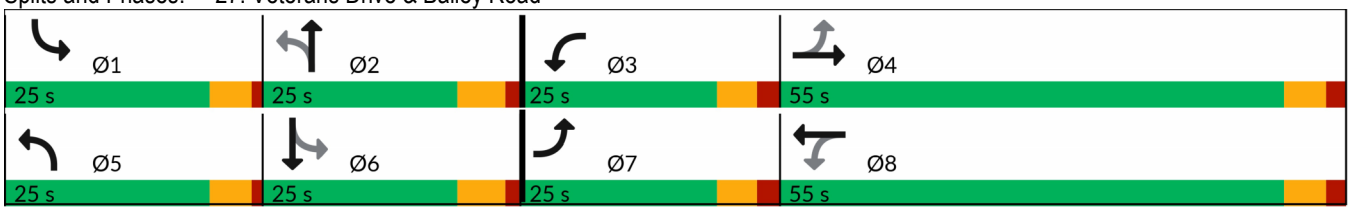


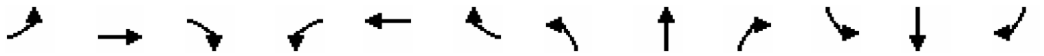
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	690	123	241	1098	142	108	112	151	56	240	127
Future Volume (vph)	73	690	123	241	1098	142	108	112	151	56	240	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		180	150		150	180		180	250		180
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.977			0.983			0.914			0.948	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3458	0	1770	3479	0	1770	3235	0	1770	3355	0
Flt Permitted	0.092			0.167			0.300			0.576		
Satd. Flow (perm)	171	3458	0	311	3479	0	559	3235	0	1073	3355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			12			164			62	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2652			5774			5367			662	
Travel Time (s)		60.3			131.2			122.0			15.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	750	134	262	1193	154	117	122	164	61	261	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	884	0	262	1347	0	117	286	0	61	399	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	12.0		3.0	12.0		3.0	10.0		3.0	12.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	55.0		25.0	55.0		25.0	25.0		25.0	25.0	
Total Split (%)	19.2%	42.3%		19.2%	42.3%		19.2%	19.2%		19.2%	19.2%	
Maximum Green (s)	19.0	49.0		19.0	49.0		20.0	19.0		20.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	50.2	42.0		61.3	50.3		35.0	24.6		28.3	19.2	
Actuated g/C Ratio	0.46	0.38		0.56	0.46		0.32	0.23		0.26	0.18	
v/c Ratio	0.40	0.66		0.73	0.84		0.39	0.33		0.18	0.62	
Control Delay (s/veh)	20.0	30.6		26.8	32.8		31.5	18.0		28.8	41.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.0	30.6		26.8	32.8		31.5	18.0		28.8	41.4	
LOS	C	C		C	C		C	B		C	D	
Approach Delay (s/veh)		29.7			31.8			21.9			39.7	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 109.2			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 31.1		Intersection LOS: C	
Intersection Capacity Utilization 74.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 27: Veterans Drive & Bailey Road



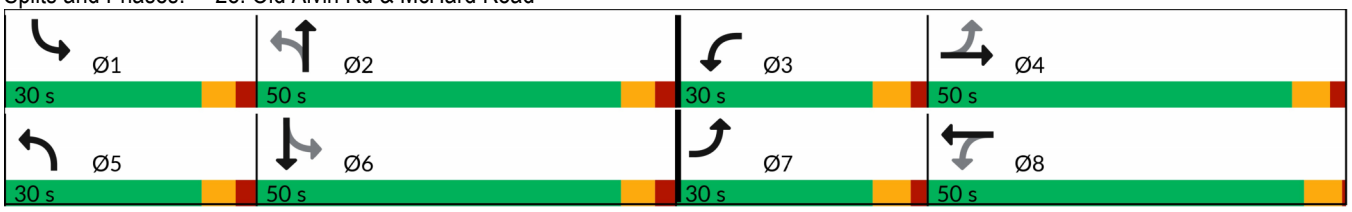


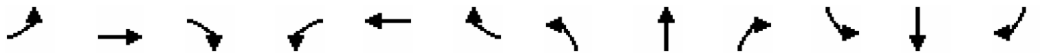
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	469	43	247	631	145	160	81	333	189	75	71
Future Volume (vph)	50	469	43	247	631	145	160	81	333	189	75	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	400		150	220		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.987			0.972			0.879			0.927	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3440	0	1770	3111	0	1770	3281	0
Flt Permitted	0.189			0.198			0.651			0.404		
Satd. Flow (perm)	352	3493	0	369	3440	0	1213	3111	0	753	3281	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			17			362			77	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2786			1445			1102			1362	
Travel Time (s)		63.3			32.8			25.0			31.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	510	47	268	686	158	174	88	362	205	82	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	557	0	268	844	0	174	450	0	205	159	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	20.0	35.0		20.0	35.0		20.0	22.5		20.0	22.5	
Total Split (s)	30.0	50.0		30.0	50.0		30.0	50.0		30.0	50.0	
Total Split (%)	18.8%	31.3%		18.8%	31.3%		18.8%	31.3%		18.8%	31.3%	
Maximum Green (s)	23.5	43.5		23.5	45.0		23.5	43.5		23.5	43.5	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	0.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	5.0		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		7.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	34.9	26.8		52.2	42.0		57.4	44.0		60.1	45.4	
Actuated g/C Ratio	0.27	0.21		0.40	0.32		0.44	0.34		0.46	0.35	
v/c Ratio	0.30	0.77		0.77	0.76		0.30	0.35		0.44	0.13	
Control Delay (s/veh)	30.1	56.8		42.9	44.8		21.6	8.7		23.5	17.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	30.1	56.8		42.9	44.8		21.6	8.7		23.5	17.6	
LOS	C	E		D	D		C	A		C	B	
Approach Delay (s/veh)		54.4			44.4			12.3			21.0	
Approach LOS		D			D			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 130.7			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 36.1		Intersection LOS: D	
Intersection Capacity Utilization 73.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 28: Old Alvin Rd & McHard Road



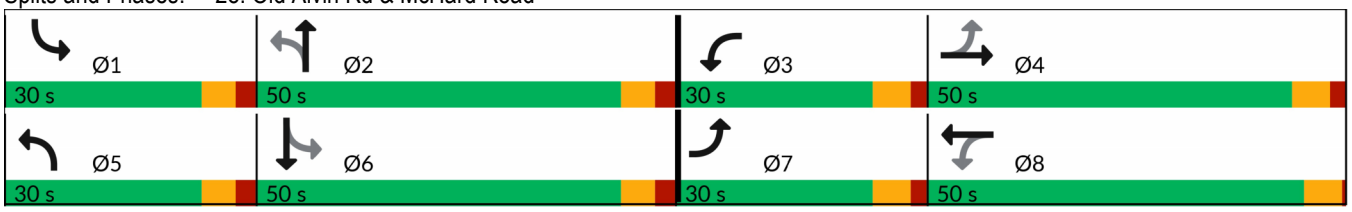


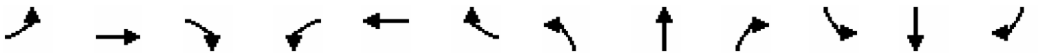
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	691	139	206	699	158	136	105	104	87	92	55
Future Volume (vph)	65	691	139	206	699	158	136	105	104	87	92	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	400		150	220		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.975			0.972			0.925			0.944	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3451	0	1770	3440	0	1770	3274	0	1770	3341	0
Flt Permitted	0.171			0.093			0.607			0.610		
Satd. Flow (perm)	319	3451	0	173	3440	0	1131	3274	0	1136	3341	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			17			113			60	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2786			1445			1102			1362	
Travel Time (s)		63.3			32.8			25.0			31.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	751	151	224	760	172	148	114	113	95	100	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	902	0	224	932	0	148	227	0	95	160	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	20.0	35.0		20.0	35.0		20.0	22.5		20.0	22.5	
Total Split (s)	30.0	50.0		30.0	50.0		30.0	50.0		30.0	50.0	
Total Split (%)	18.8%	31.3%		18.8%	31.3%		18.8%	31.3%		18.8%	31.3%	
Maximum Green (s)	23.5	43.5		23.5	45.0		23.5	43.5		23.5	43.5	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	0.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	5.0		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		7.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	50.2	41.6		65.6	52.2		56.8	43.7		51.0	40.8	
Actuated g/C Ratio	0.36	0.30		0.47	0.37		0.41	0.31		0.37	0.29	
v/c Ratio	0.35	0.87		0.79	0.72		0.28	0.21		0.21	0.16	
Control Delay (s/veh)	26.4	56.1		52.4	40.3		27.3	19.0		26.7	24.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	26.4	56.1		52.4	40.3		27.3	19.0		26.7	24.8	
LOS	C	E		D	D		C	B		C	C	
Approach Delay (s/veh)		53.9			42.7			22.3			25.5	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 139.4			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay (s/veh): 42.3		Intersection LOS: D	
Intersection Capacity Utilization 72.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 28: Old Alvin Rd & McHard Road



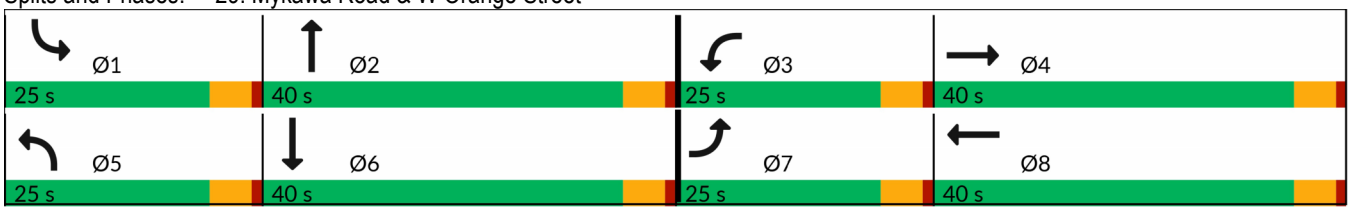


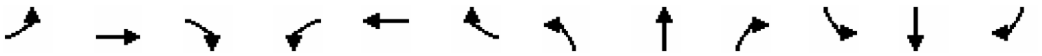
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	244	12	13	118	155	10	469	16	52	225	102
Future Volume (vph)	164	244	12	13	118	155	10	469	16	52	225	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.993			0.915			0.995			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1850	0	1770	1704	0	1770	1853	0	1770	3373	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1850	0	1770	1704	0	1770	1853	0	1770	3373	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			50			1			55	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		647			2722			1670			4252	
Travel Time (s)		14.7			61.9			38.0			96.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	178	265	13	14	128	168	11	510	17	57	245	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	178	278	0	14	296	0	11	527	0	57	356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (%)	19.2%	30.8%		19.2%	30.8%		19.2%	30.8%		19.2%	30.8%	
Maximum Green (s)	20.0	35.0		20.0	35.0		20.0	35.0		20.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	14.8	35.7		6.5	20.0		6.4	36.2		8.8	45.0	
Actuated g/C Ratio	0.15	0.37		0.07	0.21		0.07	0.37		0.09	0.46	
v/c Ratio	0.66	0.41		0.12	0.76		0.10	0.77		0.36	0.22	
Control Delay (s/veh)	53.9	26.7		51.5	44.5		51.5	39.7		52.7	16.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	53.9	26.7		51.5	44.5		51.5	39.7		52.7	16.1	
LOS	D	C		D	D		D	D		D	B	
Approach Delay (s/veh)		37.3			44.8			40.0			21.1	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 97.4			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 35.6		Intersection LOS: D	
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 29: Mykawa Road & W Orange Street



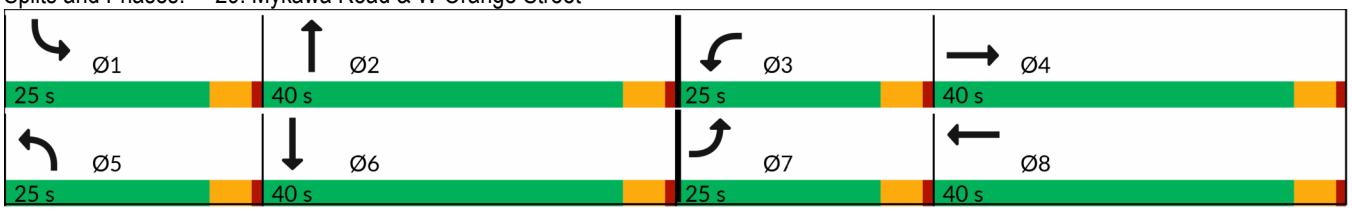


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	160	10	40	151	56	12	222	37	111	709	93
Future Volume (vph)	41	160	10	40	151	56	12	222	37	111	709	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.991			0.959			0.979			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1846	0	1770	1786	0	1770	1824	0	1770	3479	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1846	0	1770	1786	0	1770	1824	0	1770	3479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			14			6			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		647			2722			1670			4252	
Travel Time (s)		14.7			61.9			38.0			96.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	174	11	43	164	61	13	241	40	121	771	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	185	0	43	225	0	13	281	0	121	872	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (%)	19.2%	30.8%		19.2%	30.8%		19.2%	30.8%		19.2%	30.8%	
Maximum Green (s)	20.0	35.0		20.0	35.0		20.0	35.0		20.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	7.9	16.4		7.8	16.3		6.4	36.1		11.7	50.9	
Actuated g/C Ratio	0.09	0.19		0.09	0.19		0.07	0.41		0.13	0.58	
v/c Ratio	0.28	0.53		0.27	0.65		0.10	0.37		0.51	0.43	
Control Delay (s/veh)	46.1	39.1		46.1	41.7		46.2	22.9		45.8	13.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	46.1	39.1		46.1	41.7		46.2	22.9		45.8	13.9	
LOS	D	D		D	D		D	C		D	B	
Approach Delay (s/veh)		40.5			42.4			23.9			17.8	
Approach LOS		D			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 87.1			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay (s/veh): 25.4		Intersection LOS: C	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 29: Mykawa Road & W Orange Street

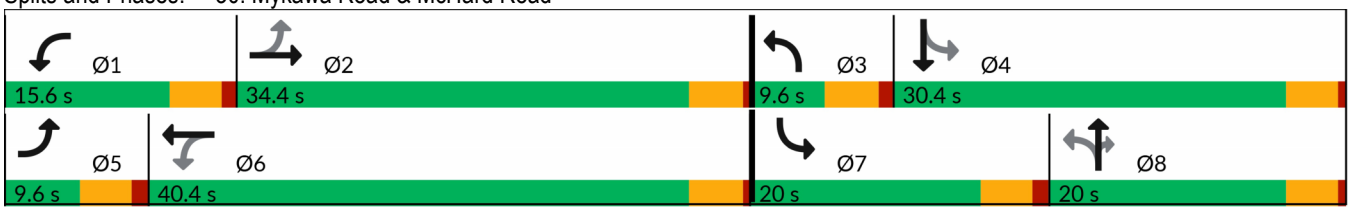


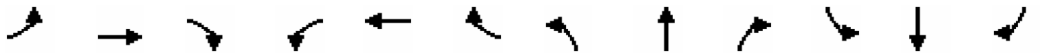
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	796	36	203	570	237	43	508	163	274	315	31
Future Volume (vph)	104	796	36	203	570	237	43	508	163	274	315	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		150	150		0	180		40
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.994			0.956				0.850		0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	1770	3383	0	1770	1863	1583	1770	3490	0
Flt Permitted	0.240			0.120			0.529			0.179		
Satd. Flow (perm)	447	3518	0	224	3383	0	985	1863	1583	333	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			85				230		12	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1946			1310			4252			883	
Travel Time (s)		44.2			29.8			72.5			15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	113	865	39	221	620	258	47	552	177	298	342	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	904	0	221	878	0	47	552	177	298	376	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	0	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	0	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	0	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0	4.0	5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0	20.0	9.5	20.0	
Total Split (s)	9.6	34.4		15.6	40.4		9.6	20.0	20.0	20.0	30.4	
Total Split (%)	10.7%	38.2%		17.3%	44.9%		10.7%	22.2%	22.2%	22.2%	33.8%	
Maximum Green (s)	5.1	30.4		11.1	36.4		5.1	16.0	16.0	15.5	26.4	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5	0.5	1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0	4.0	4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max		None	None		None	Max	Max	None	None	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Don't Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	35.0	30.4		44.9	37.8		20.6	16.0	16.0	35.1	29.9	
Actuated g/C Ratio	0.39	0.34		0.50	0.42		0.23	0.18	0.18	0.39	0.34	
v/c Ratio	0.45	0.75		0.75	0.59		0.17	1.65	0.37	0.80	0.32	
Control Delay (s/veh)	19.0	30.7		33.6	20.2		19.9	332.7	4.2	38.3	23.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	19.0	30.7		33.6	20.2		19.9	332.7	4.2	38.3	23.3	
LOS	B	C		C	C		B	F	A	D	C	
Approach Delay (s/veh)		29.4			22.9			238.8			29.9	
Approach LOS		C			C			F			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.65			
Intersection Signal Delay (s/veh): 73.1		Intersection LOS: E	
Intersection Capacity Utilization 90.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 30: Mykawa Road & McHard Road



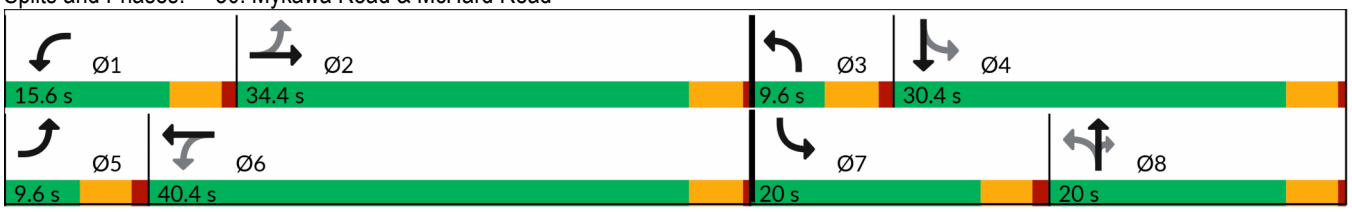


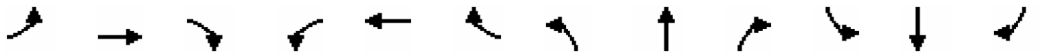
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	641	84	198	998	176	58	262	185	317	539	123
Future Volume (vph)	73	641	84	198	998	176	58	262	185	317	539	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		150	150		0	180		40
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.983			0.978				0.850		0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3461	0	1770	1863	1583	1770	3440	0
Flt Permitted	0.127			0.174			0.347			0.191		
Satd. Flow (perm)	237	3479	0	324	3461	0	646	1863	1583	356	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			27				230		31	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1946			1310			4252			883	
Travel Time (s)		44.2			29.8			72.5			15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	697	91	215	1085	191	63	285	201	345	586	134
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	788	0	215	1276	0	63	285	201	345	720	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	0	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	0	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	0	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0	4.0	5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0	20.0	9.5	20.0	
Total Split (s)	9.6	34.4		15.6	40.4		9.6	20.0	20.0	20.0	30.4	
Total Split (%)	10.7%	38.2%		17.3%	44.9%		10.7%	22.2%	22.2%	22.2%	33.8%	
Maximum Green (s)	5.1	30.4		11.1	36.4		5.1	16.0	16.0	15.5	26.4	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5	0.5	1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0	4.0	4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max		None	None		None	Max	Max	None	None	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Don't Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	35.2	30.6		44.9	37.7		20.6	16.0	16.0	35.5	28.4	
Actuated g/C Ratio	0.39	0.34		0.50	0.42		0.23	0.18	0.18	0.40	0.32	
v/c Ratio	0.44	0.66		0.66	0.86		0.30	0.86	0.43	0.89	0.65	
Control Delay (s/veh)	20.5	27.6		22.9	31.4		22.4	60.8	6.1	49.5	29.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	20.5	27.6		22.9	31.4		22.4	60.8	6.1	49.5	29.1	
LOS	C	C		C	C		C	E	A	D	C	
Approach Delay (s/veh)		27.0			30.1			36.4			35.7	
Approach LOS		C			C			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89.4			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay (s/veh): 31.8		Intersection LOS: C	
Intersection Capacity Utilization 82.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 30: Mykawa Road & McHard Road



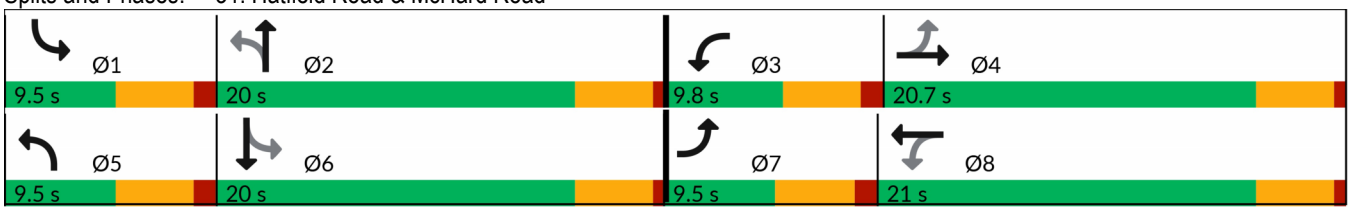


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	648	56	101	487	44	68	41	154	98	64	15
Future Volume (vph)	6	648	56	101	487	44	68	41	154	98	64	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		0	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.988			0.988			0.882			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3497	0	1770	3122	0	1770	3440	0
Flt Permitted	0.412			0.190			0.698			0.586		
Satd. Flow (perm)	767	3497	0	354	3497	0	1300	3122	0	1092	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			16			167			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2112			2249			716			526	
Travel Time (s)		48.0			51.1			16.3			12.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	704	61	110	529	48	74	45	167	107	70	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	765	0	110	577	0	74	212	0	107	86	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.7		9.8	21.0		9.5	20.0		9.5	20.0	
Total Split (%)	15.8%	34.5%		16.3%	35.0%		15.8%	33.3%		15.8%	33.3%	
Maximum Green (s)	5.0	16.7		5.3	17.0		5.0	16.0		5.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	18.8	15.7		21.6	21.1		19.9	16.8		20.7	18.5	
Actuated g/C Ratio	0.34	0.29		0.39	0.38		0.36	0.31		0.38	0.34	
v/c Ratio	0.02	0.76		0.39	0.43		0.14	0.20		0.22	0.07	
Control Delay (s/veh)	10.0	24.8		14.8	14.1		11.7	6.0		12.5	13.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.0	24.8		14.8	14.1		11.7	6.0		12.5	13.9	
LOS	A	C		B	B		B	A		B	B	
Approach Delay (s/veh)		24.7			14.2			7.5			13.1	
Approach LOS		C			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 17.3		Intersection LOS: B	
Intersection Capacity Utilization 50.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 31: Hatfield Road & McHard Road

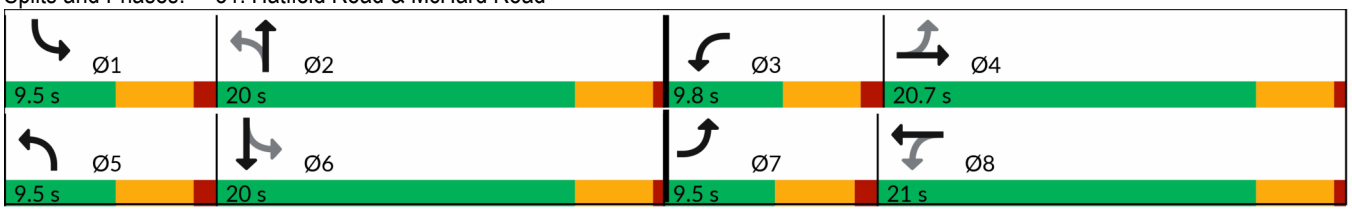


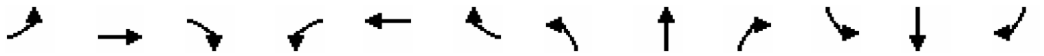
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	659	68	191	896	68	50	37	104	44	27	21
Future Volume (vph)	10	659	68	191	896	68	50	37	104	44	27	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		0	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.986			0.989			0.889			0.934	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3490	0	1770	3500	0	1770	3146	0	1770	3306	0
Flt Permitted	0.204			0.166			0.721			0.618		
Satd. Flow (perm)	380	3490	0	309	3500	0	1343	3146	0	1151	3306	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			13			113			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2112			2249			716			526	
Travel Time (s)		48.0			51.1			16.3			12.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	716	74	208	974	74	54	40	113	48	29	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	790	0	208	1048	0	54	153	0	48	52	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.7		9.8	21.0		9.5	20.0		9.5	20.0	
Total Split (%)	15.8%	34.5%		16.3%	35.0%		15.8%	33.3%		15.8%	33.3%	
Maximum Green (s)	5.0	16.7		5.3	17.0		5.0	16.0		5.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	20.5	15.9		24.6	24.1		18.5	16.2		19.3	17.9	
Actuated g/C Ratio	0.37	0.29		0.44	0.44		0.33	0.29		0.35	0.32	
v/c Ratio	0.04	0.78		0.75	0.69		0.11	0.15		0.11	0.05	
Control Delay (s/veh)	10.3	25.2		32.9	19.0		11.5	6.9		11.4	10.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.3	25.2		32.9	19.0		11.5	6.9		11.4	10.6	
LOS	B	C		C	B		B	A		B	B	
Approach Delay (s/veh)		25.0			21.3			8.1			11.0	
Approach LOS		C			C			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 21.0		Intersection LOS: C	
Intersection Capacity Utilization 52.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 31: Hatfield Road & McHard Road



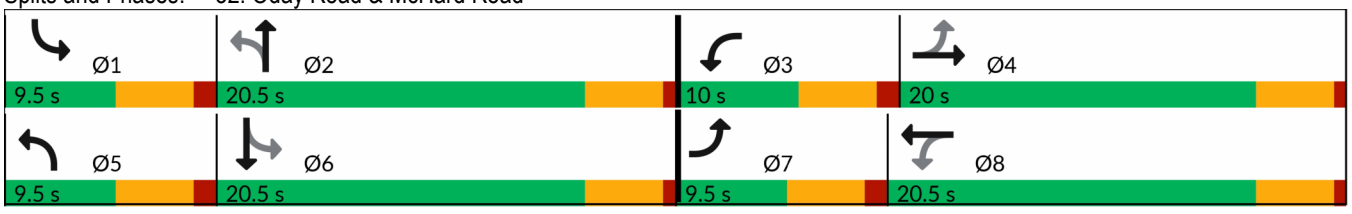


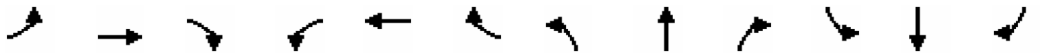
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	469	40	56	462	25	158	37	167	67	115	129
Future Volume (vph)	15	469	40	56	462	25	158	37	167	67	115	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.988			0.992			0.877			0.921	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3511	0	1770	3104	0	1770	3260	0
Flt Permitted	0.421			0.291			0.542			0.613		
Satd. Flow (perm)	784	3497	0	542	3511	0	1010	3104	0	1142	3260	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			9			182			140	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2019			2112			892			740	
Travel Time (s)		45.9			48.0			20.3			16.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	510	43	61	502	27	172	40	182	73	125	140
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	553	0	61	529	0	172	222	0	73	265	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		10.0	20.5		9.5	20.5		9.5	20.5	
Total Split (%)	15.8%	33.3%		16.7%	34.2%		15.8%	34.2%		15.8%	34.2%	
Maximum Green (s)	5.0	16.0		5.5	16.5		5.0	16.5		5.0	16.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	14.8	12.9		16.6	16.3		19.8	17.9		18.5	15.2	
Actuated g/C Ratio	0.30	0.26		0.34	0.33		0.40	0.36		0.38	0.31	
v/c Ratio	0.05	0.60		0.18	0.45		0.35	0.18		0.15	0.24	
Control Delay (s/veh)	10.7	19.8		11.8	14.7		13.1	5.4		10.9	8.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.7	19.8		11.8	14.7		13.1	5.4		10.9	8.9	
LOS	B	B		B	B		B	A		B	A	
Approach Delay (s/veh)		19.6			14.4			8.8			9.3	
Approach LOS		B			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 49.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay (s/veh): 13.9		Intersection LOS: B	
Intersection Capacity Utilization 48.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 32: Oday Road & McHard Road



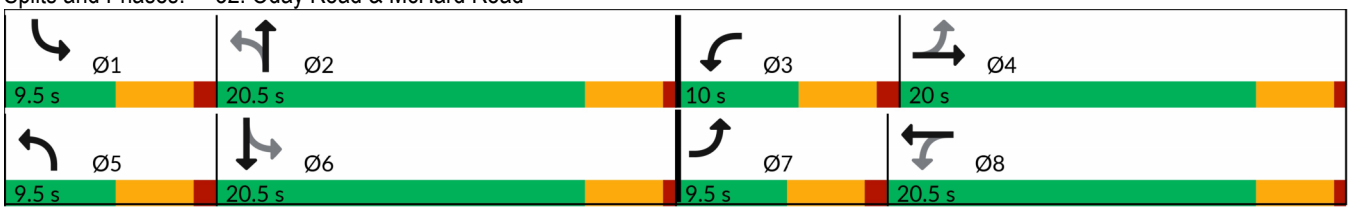


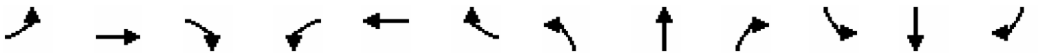
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	614	127	192	715	40	55	47	105	31	49	31
Future Volume (vph)	36	614	127	192	715	40	55	47	105	31	49	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.974			0.992			0.896			0.941	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3447	0	1770	3511	0	1770	3171	0	1770	3330	0
Flt Permitted	0.269			0.180			0.652			0.648		
Satd. Flow (perm)	501	3447	0	335	3511	0	1215	3171	0	1207	3330	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			9			114			34	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2019			2112			892			740	
Travel Time (s)		45.9			48.0			20.3			16.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	667	138	209	777	43	60	51	114	34	53	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	805	0	209	820	0	60	165	0	34	87	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		10.0	20.5		9.5	20.5		9.5	20.5	
Total Split (%)	15.8%	33.3%		16.7%	34.2%		15.8%	34.2%		15.8%	34.2%	
Maximum Green (s)	5.0	16.0		5.5	16.5		5.0	16.5		5.0	16.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	20.1	15.6		23.7	22.2		18.0	16.7		17.0	14.6	
Actuated g/C Ratio	0.37	0.29		0.44	0.41		0.33	0.31		0.32	0.27	
v/c Ratio	0.13	0.79		0.71	0.56		0.13	0.16		0.08	0.09	
Control Delay (s/veh)	10.6	24.9		29.2	17.3		11.7	6.9		11.3	11.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.6	24.9		29.2	17.3		11.7	6.9		11.3	11.7	
LOS	B	C		C	B		B	A		B	B	
Approach Delay (s/veh)		24.2			19.7			8.2			11.6	
Approach LOS		C			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 53.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay (s/veh): 19.8		Intersection LOS: B	
Intersection Capacity Utilization 53.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 32: Oday Road & McHard Road



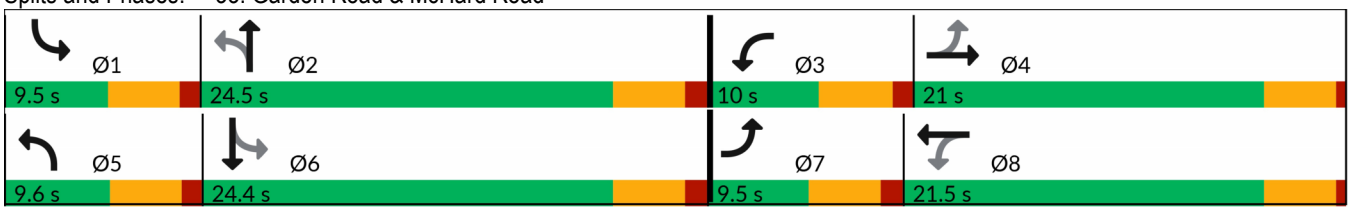


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	477	38	73	525	118	62	129	58	7	19	24
Future Volume (vph)	132	477	38	73	525	118	62	129	58	7	19	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.973			0.953			0.917	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3500	0	1770	3444	0	1770	3373	0	1770	3245	0
Flt Permitted	0.234			0.331			0.671			0.624		
Satd. Flow (perm)	436	3500	0	617	3444	0	1250	3373	0	1162	3245	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			40			63			26	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2021			2019			1010			1120	
Travel Time (s)		45.9			45.9			23.0			25.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	143	518	41	79	571	128	67	140	63	8	21	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	143	559	0	79	699	0	67	203	0	8	47	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	9.5	21.0		10.0	21.5		9.6	24.5		9.5	24.4	
Total Split (%)	14.6%	32.3%		15.4%	33.1%		14.8%	37.7%		14.6%	37.5%	
Maximum Green (s)	5.0	17.0		5.5	17.5		5.1	20.0		5.0	19.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0			5.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	19.2	17.1		18.8	15.3		25.1	24.2		23.5	20.8	
Actuated g/C Ratio	0.34	0.30		0.33	0.27		0.44	0.42		0.41	0.36	
v/c Ratio	0.53	0.53		0.25	0.74		0.11	0.14		0.02	0.04	
Control Delay (s/veh)	21.5	20.2		13.9	24.3		10.8	9.4		10.0	10.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	21.5	20.2		13.9	24.3		10.8	9.4		10.0	10.0	
LOS	C	C		B	C		B	A		A	A	
Approach Delay (s/veh)		20.5			23.3			9.7			10.0	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 57.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 19.7		Intersection LOS: B	
Intersection Capacity Utilization 46.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 33: Garden Road & McHard Road

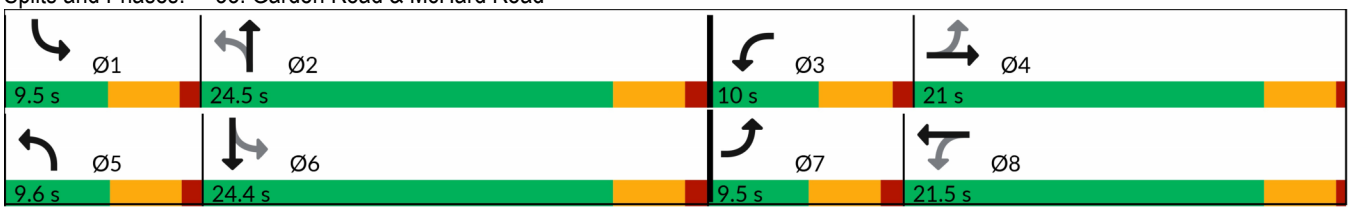


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	682	86	101	671	22	61	25	84	28	27	22
Future Volume (vph)	21	682	86	101	671	22	61	25	84	28	27	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.983			0.995			0.884			0.932	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3522	0	1770	3129	0	1770	3299	0
Flt Permitted	0.248			0.193			0.688			0.677		
Satd. Flow (perm)	462	3479	0	360	3522	0	1282	3129	0	1261	3299	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			5			91			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2021			2019			1010			1120	
Travel Time (s)		45.9			45.9			23.0			25.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	741	93	110	729	24	66	27	91	30	29	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	834	0	110	753	0	66	118	0	30	53	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	9.5	21.0		10.0	21.5		9.6	24.5		9.5	24.4	
Total Split (%)	14.6%	32.3%		15.4%	33.1%		14.8%	37.7%		14.6%	37.5%	
Maximum Green (s)	5.0	17.0		5.5	17.5		5.1	20.0		5.0	19.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0			5.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	19.8	16.6		22.1	20.7		24.1	22.3		23.2	20.5	
Actuated g/C Ratio	0.34	0.28		0.38	0.35		0.41	0.38		0.40	0.35	
v/c Ratio	0.08	0.83		0.40	0.60		0.12	0.09		0.06	0.05	
Control Delay (s/veh)	12.5	30.6		16.6	20.2		11.0	6.3		10.5	10.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	12.5	30.6		16.6	20.2		11.0	6.3		10.5	10.7	
LOS	B	C		B	C		B	A		B	B	
Approach Delay (s/veh)		30.1			19.8			8.0			10.6	
Approach LOS		C			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 58.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 22.7		Intersection LOS: C	
Intersection Capacity Utilization 48.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 33: Garden Road & McHard Road

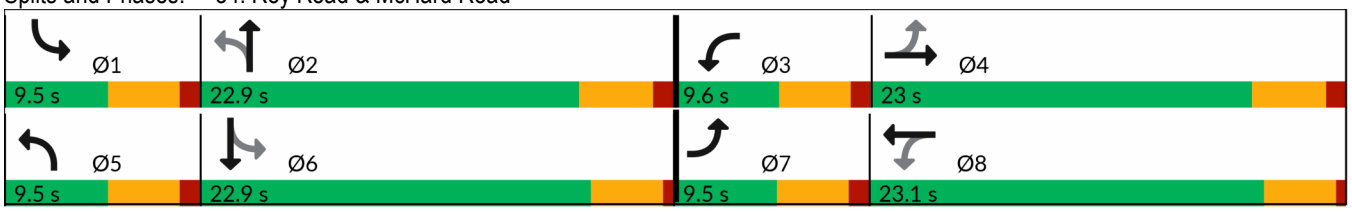


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	518	33	77	549	4	38	10	92	12	7	9
Future Volume (vph)	9	518	33	77	549	4	38	10	92	12	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		150	100		0	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.991			0.999			0.865			0.917	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3507	0	1770	3536	0	1770	3061	0	1770	3245	0
Flt Permitted	0.353			0.281			0.717			0.682		
Satd. Flow (perm)	658	3507	0	523	3536	0	1336	3061	0	1270	3245	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1			100			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1957			2021			616			706	
Travel Time (s)		44.5			45.9			14.0			16.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	563	36	84	597	4	41	11	100	13	8	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	599	0	84	601	0	41	111	0	13	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	5.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	22.5		9.5	20.0	
Total Split (s)	9.5	23.0		9.6	23.1		9.5	22.9		9.5	22.9	
Total Split (%)	14.6%	35.4%		14.8%	35.5%		14.6%	35.2%		14.6%	35.2%	
Maximum Green (s)	5.0	18.5		5.1	19.1		5.0	18.4		5.0	18.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	1.0		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.5		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			5.0			7.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	17.2	14.6		18.9	18.6		21.8	21.0		21.1	20.0	
Actuated g/C Ratio	0.33	0.28		0.37	0.36		0.42	0.41		0.41	0.39	
v/c Ratio	0.03	0.60		0.26	0.47		0.07	0.09		0.02	0.01	
Control Delay (s/veh)	10.6	19.8		12.5	14.9		11.2	5.0		11.0	11.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.6	19.8		12.5	14.9		11.2	5.0		11.0	11.6	
LOS	B	B		B	B		B	A		B	B	
Approach Delay (s/veh)		19.6			14.6			6.7			11.4	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 51.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay (s/veh): 15.8		Intersection LOS: B	
Intersection Capacity Utilization 39.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 34: Roy Road & McHard Road

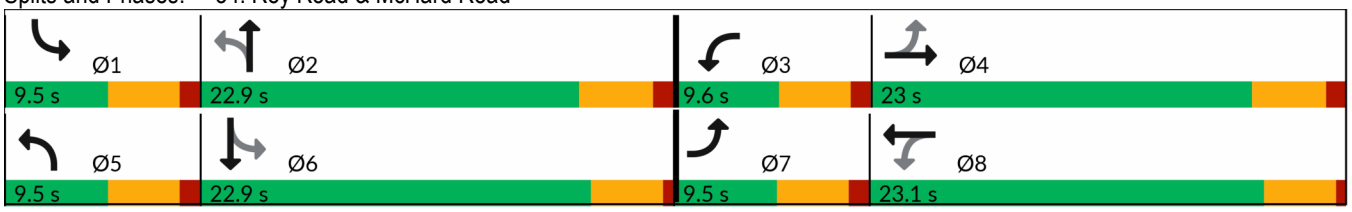


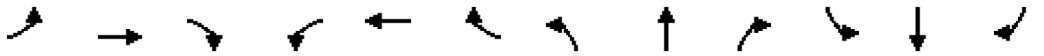
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	756	67	93	625	7	44	6	43	7	9	6
Future Volume (vph)	12	756	67	93	625	7	44	6	43	7	9	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		150	100		0	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.988			0.998			0.869			0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3532	0	1770	3076	0	1770	3320	0
Flt Permitted	0.322			0.168			0.686			0.720		
Satd. Flow (perm)	600	3497	0	313	3532	0	1278	3076	0	1341	3320	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			2			47			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1957			2021			616			706	
Travel Time (s)		44.5			45.9			14.0			16.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	822	73	101	679	8	48	7	47	8	10	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	895	0	101	687	0	48	54	0	8	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	5.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	22.5		9.5	20.0	
Total Split (s)	9.5	23.0		9.6	23.1		9.5	22.9		9.5	22.9	
Total Split (%)	14.6%	35.4%		14.8%	35.5%		14.6%	35.2%		14.6%	35.2%	
Maximum Green (s)	5.0	18.5		5.1	19.1		5.0	18.4		5.0	18.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	1.0		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.5		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			5.0			7.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	21.6	17.8		24.2	23.8		23.3	22.4		21.7	19.5	
Actuated g/C Ratio	0.37	0.30		0.41	0.41		0.40	0.38		0.37	0.33	
v/c Ratio	0.04	0.83		0.39	0.48		0.09	0.04		0.01	0.02	
Control Delay (s/veh)	11.1	28.9		15.4	15.3		11.6	6.3		11.0	13.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	11.1	28.9		15.4	15.3		11.6	6.3		11.0	13.3	
LOS	B	C		B	B		B	A		B	B	
Approach Delay (s/veh)		28.7			15.3			8.8			12.5	
Approach LOS		C			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 58.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 21.6		Intersection LOS: C	
Intersection Capacity Utilization 48.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 34: Roy Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	447	58	67	528	9	81	28	93	13	10	16
Future Volume (vph)	1	447	58	67	528	9	81	28	93	13	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	120		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.983			0.997			0.884			0.909	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3529	0	1770	3129	0	1770	3217	0
Flt Permitted	0.397			0.319			0.530			0.669		
Satd. Flow (perm)	740	3479	0	594	3529	0	987	3129	0	1246	3217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			3			101			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2239			1957			302			796	
Travel Time (s)		50.9			44.5			6.9			18.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	486	63	73	574	10	88	30	101	14	11	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	549	0	73	584	0	88	131	0	14	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	25.0		10.0	25.5		9.5	20.5		9.5	20.5	
Total Split (%)	14.6%	38.5%		15.4%	39.2%		14.6%	31.5%		14.6%	31.5%	
Maximum Green (s)	5.0	20.5		5.5	21.5		5.0	16.5		5.0	16.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		7.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	15.9	13.3		17.9	17.7		17.7	17.5		13.6	13.5	
Actuated g/C Ratio	0.34	0.29		0.39	0.38		0.38	0.38		0.29	0.29	
v/c Ratio	0.00	0.54		0.19	0.43		0.16	0.11		0.03	0.03	
Control Delay (s/veh)	8.0	16.4		9.5	12.3		12.7	6.4		16.4	12.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	8.0	16.4		9.5	12.3		12.7	6.4		16.4	12.7	
LOS	A	B		A	B		B	A		B	B	
Approach Delay (s/veh)		16.4			12.0			8.9			13.9	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 46.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay (s/veh): 13.2		Intersection LOS: B	
Intersection Capacity Utilization 40.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 35: Max Road/Herridge Road & McHard Road

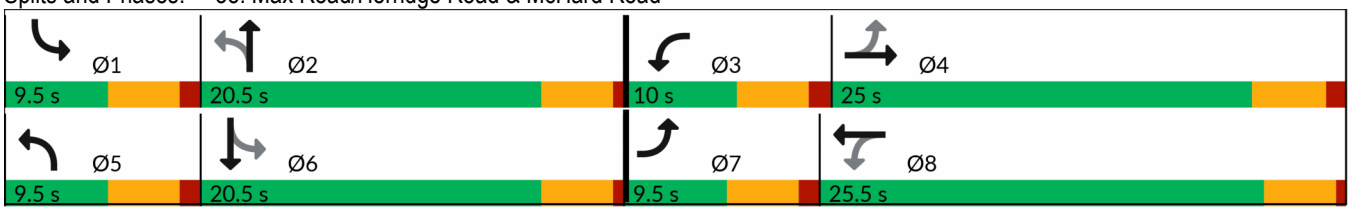


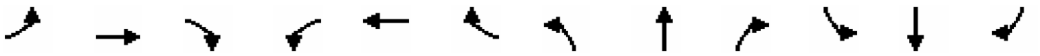
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	715	75	112	610	10	47	25	62	9	12	7
Future Volume (vph)	13	715	75	112	610	10	47	25	62	9	12	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	120		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.986			0.998			0.893			0.943	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3490	0	1770	3532	0	1770	3161	0	1770	3337	0
Flt Permitted	0.368			0.168			0.608			0.693		
Satd. Flow (perm)	685	3490	0	313	3532	0	1133	3161	0	1291	3337	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			3			67			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2239			1957			302			796	
Travel Time (s)		50.9			44.5			6.9			18.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	777	82	122	663	11	51	27	67	10	13	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	859	0	122	674	0	51	94	0	10	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	25.0		10.0	25.5		9.5	20.5		9.5	20.5	
Total Split (%)	14.6%	38.5%		15.4%	39.2%		14.6%	31.5%		14.6%	31.5%	
Maximum Green (s)	5.0	20.5		5.5	21.5		5.0	16.5		5.0	16.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		7.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	21.9	18.2		25.0	24.6		17.4	17.1		15.3	15.1	
Actuated g/C Ratio	0.41	0.34		0.47	0.46		0.33	0.32		0.29	0.28	
v/c Ratio	0.04	0.71		0.40	0.41		0.11	0.09		0.02	0.02	
Control Delay (s/veh)	8.1	19.8		11.9	11.4		14.3	7.8		16.2	15.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	8.1	19.8		11.9	11.4		14.3	7.8		16.2	15.3	
LOS	A	B		B	B		B	A		B	B	
Approach Delay (s/veh)		19.6			11.4			10.1			15.6	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 53.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay (s/veh): 15.3		Intersection LOS: B	
Intersection Capacity Utilization 48.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 35: Max Road/Herridge Road & McHard Road



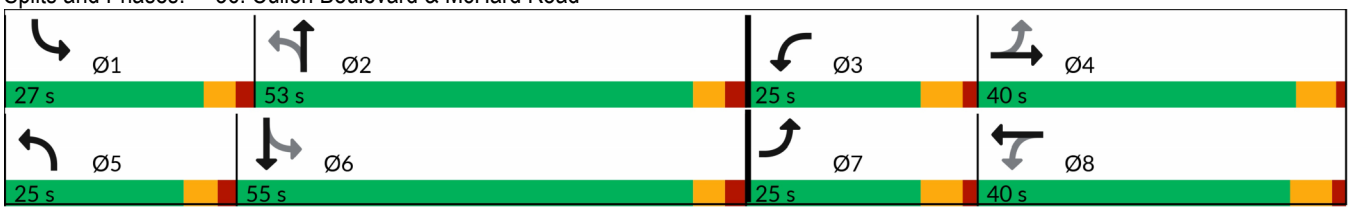


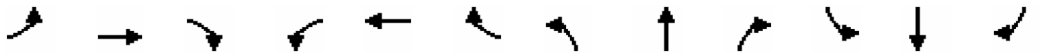
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	337	237	84	403	327	216	1192	56	155	682	184
Future Volume (vph)	219	337	237	84	403	327	216	1192	56	155	682	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	120		0	300		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.938			0.933			0.993			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3320	0	1770	3302	0	1770	3514	0	1770	3426	0
Flt Permitted	0.103			0.308			0.123			0.080		
Satd. Flow (perm)	192	3320	0	574	3302	0	229	3514	0	149	3426	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			132			3			26	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		283			3590			1925			1330	
Travel Time (s)		6.4			81.6			43.8			30.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	238	366	258	91	438	355	235	1296	61	168	741	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	238	624	0	91	793	0	235	1357	0	168	941	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0		3.0	7.0		3.0	5.0		5.0	3.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	23.5		20.0	23.5	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	53.0		27.0	55.0	
Total Split (%)	17.2%	27.6%		17.2%	27.6%		17.2%	36.6%		18.6%	37.9%	
Maximum Green (s)	19.0	34.5		19.0	34.0		19.5	47.5		21.5	49.5	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.0		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	56.4	41.0		42.3	32.3		68.6	51.8		64.2	49.7	
Actuated g/C Ratio	0.40	0.29		0.30	0.23		0.49	0.37		0.46	0.36	
v/c Ratio	0.84	0.59		0.35	0.92		0.79	1.04		0.71	0.76	
Control Delay (s/veh)	62.1	37.2		31.3	60.3		47.0	79.4		48.3	44.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	62.1	37.2		31.3	60.3		47.0	79.4		48.3	44.6	
LOS	E	D		C	E		D	E		D	D	
Approach Delay (s/veh)		44.1			57.3			74.6			45.2	
Approach LOS		D			E			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 140			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay (s/veh): 57.9		Intersection LOS: E	
Intersection Capacity Utilization 96.3%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 36: Cullen Boulevard & McHard Road



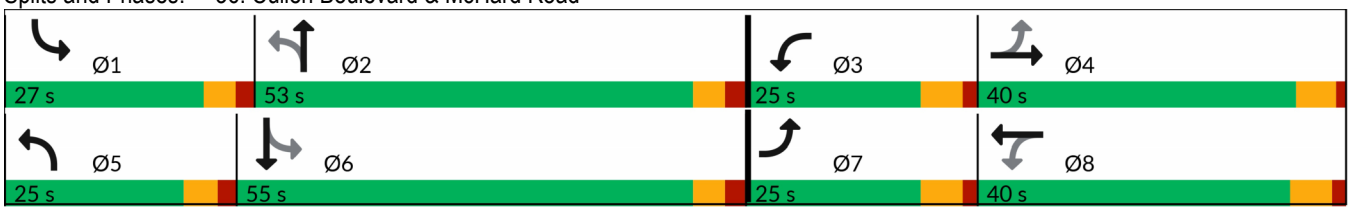


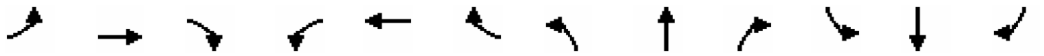
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	246	577	364	93	481	189	274	838	74	295	1510	286
Future Volume (vph)	246	577	364	93	481	189	274	838	74	295	1510	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	120		0	300		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.942			0.958			0.988			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3334	0	1770	3391	0	1770	3497	0	1770	3454	0
Flt Permitted	0.102			0.122			0.084			0.081		
Satd. Flow (perm)	190	3334	0	227	3391	0	156	3497	0	151	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		91			37			7			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		283			3590			1925			1330	
Travel Time (s)		6.4			81.6			43.8			30.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	267	627	396	101	523	205	298	911	80	321	1641	311
Shared Lane Traffic (%)												
Lane Group Flow (vph)	267	1023	0	101	728	0	298	991	0	321	1952	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0		3.0	7.0		3.0	5.0		5.0	3.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	23.5		20.0	23.5	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	53.0		27.0	55.0	
Total Split (%)	17.2%	27.6%		17.2%	27.6%		17.2%	36.6%		18.6%	37.9%	
Maximum Green (s)	19.0	34.5		19.0	34.0		19.5	47.5		21.5	49.5	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.0		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	57.5	41.5		43.6	32.8		67.0	47.5		71.0	49.5	
Actuated g/C Ratio	0.40	0.29		0.30	0.23		0.47	0.33		0.49	0.34	
v/c Ratio	0.94	1.00		0.55	0.91		1.02	0.86		1.02	1.63	
Control Delay (s/veh)	80.0	73.1		40.2	67.2		101.3	53.3		97.7	318.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	80.0	73.1		40.2	67.2		101.3	53.3		97.7	318.3	
LOS	F	E		D	E		F	D		F	F	
Approach Delay (s/veh)		74.5			63.9			64.4			287.2	
Approach LOS		E			E			E			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 143.8			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.63			
Intersection Signal Delay (s/veh): 155.8		Intersection LOS: F	
Intersection Capacity Utilization 118.2%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 36: Cullen Boulevard & McHard Road



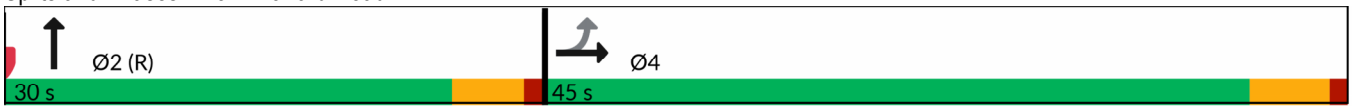


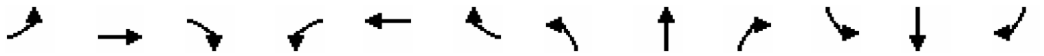
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	753	0	0	0	0	0	61	44	0	0	0
Future Volume (vph)	52	753	0	0	0	0	0	61	44	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.937				
Flt Protected	0.950											
Satd. Flow (prot)	1770	3539	0	0	0	0	0	3316	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	3539	0	0	0	0	0	3316	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	57							48				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		553			824			256			481	
Travel Time (s)		12.6			18.7			5.8			10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	818	0	0	0	0	0	66	48	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	818	0	0	0	0	0	114	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2				
Detector Template	Left	Thru						Thru				
Leading Detector (ft)	20	100						100				
Trailing Detector (ft)	0	0						0				
Detector 1 Position(ft)	0	0						0				
Detector 1 Size(ft)	20	6						6				
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0				
Detector 1 Queue (s)	0.0	0.0						0.0				
Detector 1 Delay (s)	0.0	0.0						0.0				
Detector 2 Position(ft)		94						94				
Detector 2 Size(ft)		6						6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type	Perm	NA						NA				
Protected Phases		4						2				
Permitted Phases	4											
Detector Phase	4	4						2				
Switch Phase												
Minimum Initial (s)	20.0	20.0						10.0				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	35.0	35.0						25.0				
Total Split (s)	45.0	45.0						30.0				
Total Split (%)	60.0%	60.0%						40.0%				
Maximum Green (s)	39.5	39.5						25.0				
Yellow Time (s)	4.5	4.5						4.0				
All-Red Time (s)	1.0	1.0						1.0				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	5.5	5.5						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0				
Recall Mode	None	None						C-Max				
Walk Time (s)	7.0	7.0						7.0				
Flash Don't Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	26.1	26.1						38.4				
Actuated g/C Ratio	0.35	0.35						0.51				
v/c Ratio	0.09	0.66						0.07				
Control Delay (s/veh)	4.3	23.0						7.3				
Queue Delay	0.0	0.0						0.0				
Total Delay (s/veh)	4.3	23.0						7.3				
LOS	A	C						A				
Approach Delay (s/veh)		21.8						7.3				
Approach LOS		C						A				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 20.1		Intersection LOS: C	
Intersection Capacity Utilization 64.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 37: McHard Road



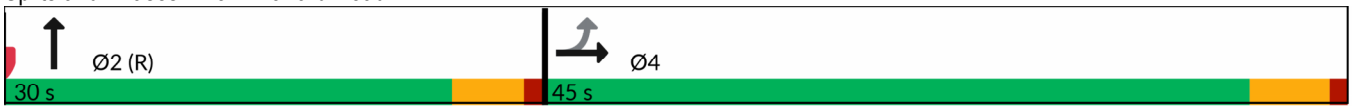


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	209	1121	0	0	0	0	0	99	36	0	0	0
Future Volume (vph)	209	1121	0	0	0	0	0	99	36	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.960				
Flt Protected	0.950											
Satd. Flow (prot)	1770	3539	0	0	0	0	0	3398	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	3539	0	0	0	0	0	3398	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	227							39				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		553			824			256			481	
Travel Time (s)		12.6			18.7			5.8			10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	227	1218	0	0	0	0	0	108	39	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	1218	0	0	0	0	0	147	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2				
Detector Template	Left	Thru						Thru				
Leading Detector (ft)	20	100						100				
Trailing Detector (ft)	0	0						0				
Detector 1 Position(ft)	0	0						0				
Detector 1 Size(ft)	20	6						6				
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0				
Detector 1 Queue (s)	0.0	0.0						0.0				
Detector 1 Delay (s)	0.0	0.0						0.0				
Detector 2 Position(ft)		94						94				
Detector 2 Size(ft)		6						6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type	Perm	NA						NA				
Protected Phases		4						2				
Permitted Phases	4											
Detector Phase	4	4						2				
Switch Phase												
Minimum Initial (s)	20.0	20.0						10.0				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	35.0	35.0						25.0				
Total Split (s)	45.0	45.0						30.0				
Total Split (%)	60.0%	60.0%						40.0%				
Maximum Green (s)	39.5	39.5						25.0				
Yellow Time (s)	4.5	4.5						4.0				
All-Red Time (s)	1.0	1.0						1.0				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	5.5	5.5						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0				
Recall Mode	None	None						C-Max				
Walk Time (s)	7.0	7.0						7.0				
Flash Don't Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	36.1	36.1						28.4				
Actuated g/C Ratio	0.48	0.48						0.38				
v/c Ratio	0.23	0.72						0.11				
Control Delay (s/veh)	2.1	17.7						12.6				
Queue Delay	0.0	0.0						0.0				
Total Delay (s/veh)	2.1	17.7						12.6				
LOS	A	B						B				
Approach Delay (s/veh)		15.3						12.6				
Approach LOS		B						B				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay (s/veh): 15.0		Intersection LOS: B	
Intersection Capacity Utilization 92.3%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 37: McHard Road

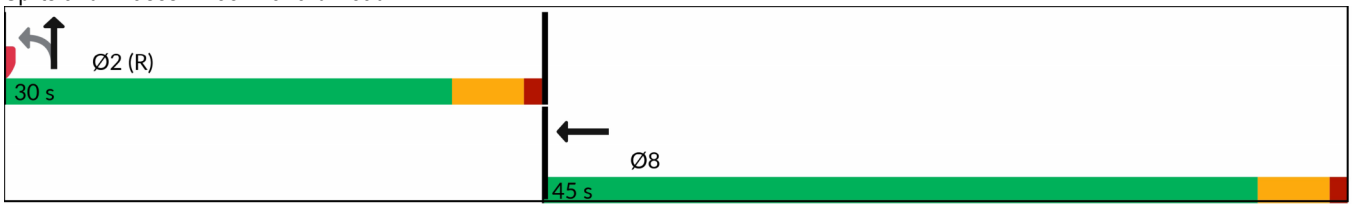


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	816	44	84	62	0	0	0	0
Future Volume (vph)	0	0	0	0	816	44	84	62	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt					0.992							
Flt Protected								0.972				
Satd. Flow (prot)	0	0	0	0	3511	0	0	3440	0	0	0	0
Flt Permitted								0.972				
Satd. Flow (perm)	0	0	0	0	3511	0	0	3440	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					11			91				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			3717			481			228	
Travel Time (s)		14.8			84.5			10.9			5.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	887	48	91	67	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	935	0	0	158	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					6		20	6				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type					NA		Perm	NA				
Protected Phases					8			2				
Permitted Phases							2					
Detector Phase					8		2	2				
Switch Phase												
Minimum Initial (s)					20.0		10.0	10.0				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)					35.0		25.0	25.0				
Total Split (s)					45.0		30.0	30.0				
Total Split (%)					60.0%		40.0%	40.0%				
Maximum Green (s)					40.0		25.0	25.0				
Yellow Time (s)					4.0		4.0	4.0				
All-Red Time (s)					1.0		1.0	1.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					3.0		3.0	3.0				
Recall Mode					None		C-Max	C-Max				
Walk Time (s)					7.0		7.0	7.0				
Flash Don't Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					28.7			36.3				
Actuated g/C Ratio					0.38			0.48				
v/c Ratio					0.69			0.09				
Control Delay (s/veh)					21.5			5.4				
Queue Delay					0.0			0.0				
Total Delay (s/veh)					21.5			5.4				
LOS					C			A				
Approach Delay (s/veh)					21.5			5.4				
Approach LOS					C			A				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 19.2		Intersection LOS: B	
Intersection Capacity Utilization 40.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 38: McHard Road

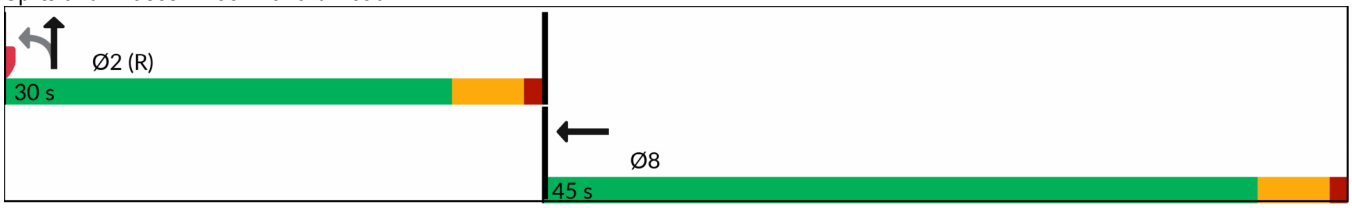


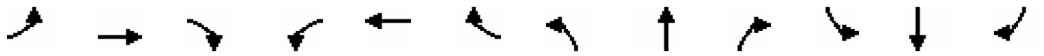
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1024	80	124	188	0	0	0	0
Future Volume (vph)	0	0	0	0	1024	80	124	188	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt					0.989							
Flt Protected								0.980				
Satd. Flow (prot)	0	0	0	0	3500	0	0	3468	0	0	0	0
Flt Permitted								0.980				
Satd. Flow (perm)	0	0	0	0	3500	0	0	3468	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					16			67				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			3717			481			228	
Travel Time (s)		14.8			84.5			10.9			5.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1113	87	135	204	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1200	0	0	339	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					6		20	6				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type					NA		Perm	NA				
Protected Phases					8			2				
Permitted Phases							2					
Detector Phase					8		2	2				
Switch Phase												
Minimum Initial (s)					20.0		10.0	10.0				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)					35.0		25.0	25.0				
Total Split (s)					45.0		30.0	30.0				
Total Split (%)					60.0%		40.0%	40.0%				
Maximum Green (s)					40.0		25.0	25.0				
Yellow Time (s)					4.0		4.0	4.0				
All-Red Time (s)					1.0		1.0	1.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					3.0		3.0	3.0				
Recall Mode					None		C-Max	C-Max				
Walk Time (s)					7.0		7.0	7.0				
Flash Don't Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					35.0			30.0				
Actuated g/C Ratio					0.47			0.40				
v/c Ratio					0.73			0.24				
Control Delay (s/veh)					18.5			11.8				
Queue Delay					0.0			0.0				
Total Delay (s/veh)					18.5			11.8				
LOS					B			B				
Approach Delay (s/veh)					18.5			11.8				
Approach LOS					B			B				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 17.0		Intersection LOS: B	
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 38: McHard Road



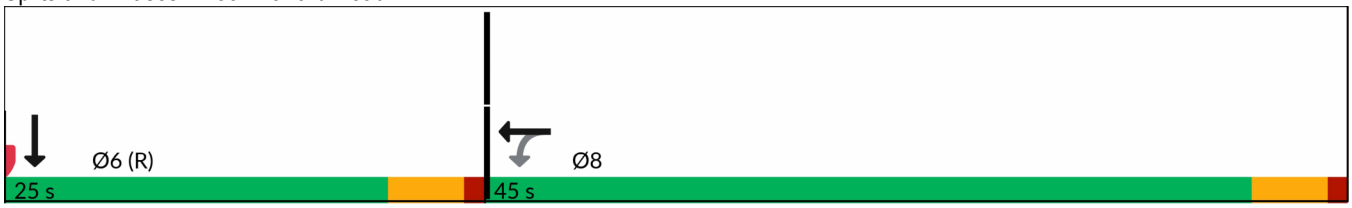


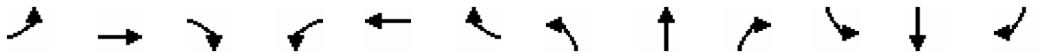
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	37	869	0	0	0	0	0	95	141
Future Volume (vph)	0	0	0	37	869	0	0	0	0	0	95	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt											0.910	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1770	3539	0	0	0	0	0	3221	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1770	3539	0	0	0	0	0	3221	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)				40							123	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1629			651			450			272	
Travel Time (s)		37.0			14.8			10.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	40	945	0	0	0	0	0	103	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	40	945	0	0	0	0	0	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2						2	
Detector Template				Left	Thru						Thru	
Leading Detector (ft)				20	100						100	
Trailing Detector (ft)				0	0						0	
Detector 1 Position(ft)				0	0						0	
Detector 1 Size(ft)				20	6						6	
Detector 1 Type				Cl+Ex	Cl+Ex						Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0						0.0	
Detector 1 Queue (s)				0.0	0.0						0.0	
Detector 1 Delay (s)				0.0	0.0						0.0	
Detector 2 Position(ft)					94						94	
Detector 2 Size(ft)					6						6	
Detector 2 Type					Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0						0.0	
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Detector Phase				8	8						6	
Switch Phase												
Minimum Initial (s)				20.0	20.0						10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				35.0	35.0						23.0	
Total Split (s)				45.0	45.0						25.0	
Total Split (%)				64.3%	64.3%						35.7%	
Maximum Green (s)				40.0	40.0						20.0	
Yellow Time (s)				4.0	4.0						4.0	
All-Red Time (s)				1.0	1.0						1.0	
Lost Time Adjust (s)				0.0	0.0						0.0	
Total Lost Time (s)				5.0	5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0						3.0	
Recall Mode				None	None						C-Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Don't Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)				28.1	28.1						31.9	
Actuated g/C Ratio				0.40	0.40						0.46	
v/c Ratio				0.05	0.67						0.17	
Control Delay (s/veh)				3.6	19.0						7.5	
Queue Delay				0.0	0.0						0.0	
Total Delay (s/veh)				3.6	19.0						7.5	
LOS				A	B						A	
Approach Delay (s/veh)					18.4						7.5	
Approach LOS					B						A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 16.1		Intersection LOS: B	
Intersection Capacity Utilization 40.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 39: McHard Road



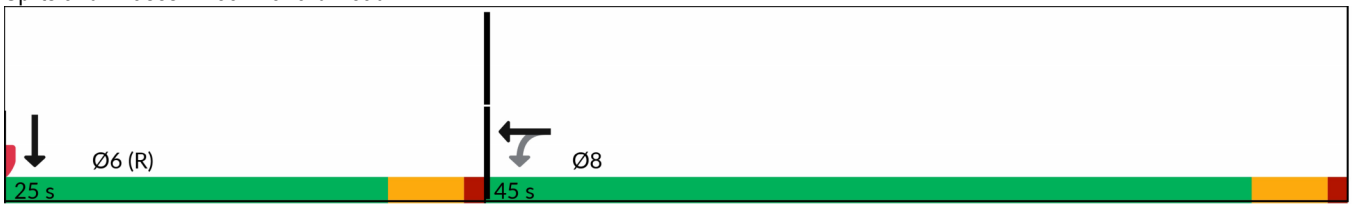


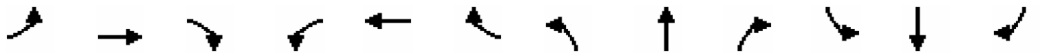
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	70	1084	0	0	0	0	0	61	112
Future Volume (vph)	0	0	0	70	1084	0	0	0	0	0	61	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt											0.903	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1770	3539	0	0	0	0	0	3196	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1770	3539	0	0	0	0	0	3196	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)				76							70	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1629			651			450			272	
Travel Time (s)		37.0			14.8			10.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	76	1178	0	0	0	0	0	66	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	76	1178	0	0	0	0	0	188	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2						2	
Detector Template				Left	Thru						Thru	
Leading Detector (ft)				20	100						100	
Trailing Detector (ft)				0	0						0	
Detector 1 Position(ft)				0	0						0	
Detector 1 Size(ft)				20	6						6	
Detector 1 Type				Cl+Ex	Cl+Ex						Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0						0.0	
Detector 1 Queue (s)				0.0	0.0						0.0	
Detector 1 Delay (s)				0.0	0.0						0.0	
Detector 2 Position(ft)					94						94	
Detector 2 Size(ft)					6						6	
Detector 2 Type					Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0						0.0	
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Detector Phase				8	8						6	
Switch Phase												
Minimum Initial (s)				20.0	20.0						10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				35.0	35.0						23.0	
Total Split (s)				45.0	45.0						25.0	
Total Split (%)				64.3%	64.3%						35.7%	
Maximum Green (s)				40.0	40.0						20.0	
Yellow Time (s)				4.0	4.0						4.0	
All-Red Time (s)				1.0	1.0						1.0	
Lost Time Adjust (s)				0.0	0.0						0.0	
Total Lost Time (s)				5.0	5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0						3.0	
Recall Mode				None	None						C-Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Don't Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)				33.9	33.9						26.1	
Actuated g/C Ratio				0.48	0.48						0.37	
v/c Ratio				0.08	0.69						0.15	
Control Delay (s/veh)				2.2	15.8						11.1	
Queue Delay				0.0	0.0						0.0	
Total Delay (s/veh)				2.2	15.8						11.1	
LOS				A	B						B	
Approach Delay (s/veh)					15.0						11.1	
Approach LOS					B						B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 14.5		Intersection LOS: B	
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 39: McHard Road



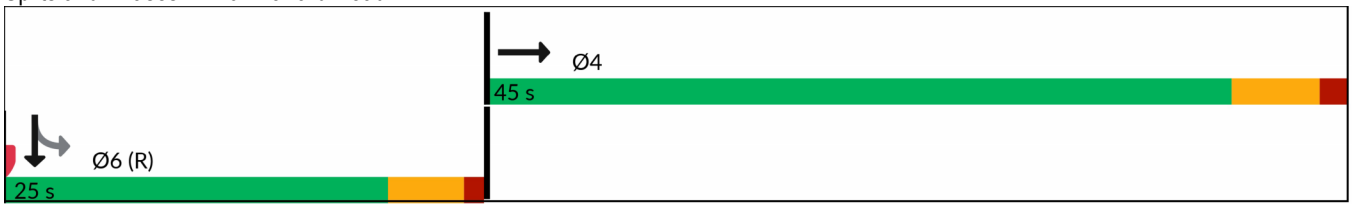


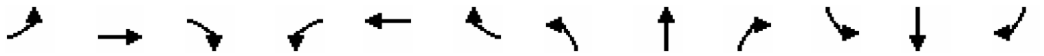
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	702	55	0	0	0	0	0	0	102	27	0
Future Volume (vph)	0	702	55	0	0	0	0	0	0	102	27	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.989										
Flt Protected											0.962	
Satd. Flow (prot)	0	3500	0	0	0	0	0	0	0	0	3405	0
Flt Permitted											0.962	
Satd. Flow (perm)	0	3500	0	0	0	0	0	0	0	0	3405	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		19									111	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1663			553			168			450	
Travel Time (s)		37.8			12.6			3.8			10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	763	60	0	0	0	0	0	0	111	29	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	823	0	0	0	0	0	0	0	0	140	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2								1	2	
Detector Template		Thru								Left	Thru	
Leading Detector (ft)		100								20	100	
Trailing Detector (ft)		0								0	0	
Detector 1 Position(ft)		0								0	0	
Detector 1 Size(ft)		6								20	6	
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0								0.0	0.0	
Detector 1 Queue (s)		0.0								0.0	0.0	
Detector 1 Delay (s)		0.0								0.0	0.0	
Detector 2 Position(ft)		94									94	
Detector 2 Size(ft)		6									6	
Detector 2 Type		Cl+Ex									Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0									0.0	
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Detector Phase		4								6	6	
Switch Phase												
Minimum Initial (s)		20.0								10.0	10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		35.0								23.0	23.0	
Total Split (s)		45.0								25.0	25.0	
Total Split (%)		64.3%								35.7%	35.7%	
Maximum Green (s)		39.0								20.0	20.0	
Yellow Time (s)		4.5								4.0	4.0	
All-Red Time (s)		1.5								1.0	1.0	
Lost Time Adjust (s)		0.0									0.0	
Total Lost Time (s)		6.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0								3.0	3.0	
Recall Mode		None								C-Max	C-Max	
Walk Time (s)		7.0								7.0	7.0	
Flash Don't Walk (s)		11.0								11.0	11.0	
Pedestrian Calls (#/hr)		0								0	0	
Act Effct Green (s)		24.7									34.3	
Actuated g/C Ratio		0.35									0.49	
v/c Ratio		0.66									0.08	
Control Delay (s/veh)		20.8									2.3	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		20.8									2.3	
LOS		C									A	
Approach Delay (s/veh)		20.8									2.3	
Approach LOS		C									A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 18.2		Intersection LOS: B	
Intersection Capacity Utilization 38.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 40: McHard Road



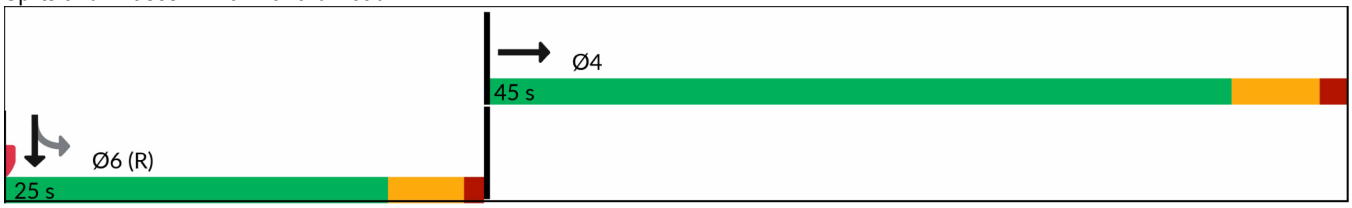


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1269	129	0	0	0	0	0	0	65	64	0
Future Volume (vph)	0	1269	129	0	0	0	0	0	0	65	64	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.986										
Flt Protected											0.975	
Satd. Flow (prot)	0	3490	0	0	0	0	0	0	0	0	3451	0
Flt Permitted											0.975	
Satd. Flow (perm)	0	3490	0	0	0	0	0	0	0	0	3451	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		25									47	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1663			553			168			450	
Travel Time (s)		37.8			12.6			3.8			10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1379	140	0	0	0	0	0	0	71	70	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1519	0	0	0	0	0	0	0	0	141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2								1	2	
Detector Template		Thru								Left	Thru	
Leading Detector (ft)		100								20	100	
Trailing Detector (ft)		0								0	0	
Detector 1 Position(ft)		0								0	0	
Detector 1 Size(ft)		6								20	6	
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0								0.0	0.0	
Detector 1 Queue (s)		0.0								0.0	0.0	
Detector 1 Delay (s)		0.0								0.0	0.0	
Detector 2 Position(ft)		94									94	
Detector 2 Size(ft)		6									6	
Detector 2 Type		Cl+Ex									Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0									0.0	
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Detector Phase		4								6	6	
Switch Phase												
Minimum Initial (s)		20.0								10.0	10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		35.0								23.0	23.0	
Total Split (s)		45.0								25.0	25.0	
Total Split (%)		64.3%								35.7%	35.7%	
Maximum Green (s)		39.0								20.0	20.0	
Yellow Time (s)		4.5								4.0	4.0	
All-Red Time (s)		1.5								1.0	1.0	
Lost Time Adjust (s)		0.0									0.0	
Total Lost Time (s)		6.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0								3.0	3.0	
Recall Mode		None								C-Max	C-Max	
Walk Time (s)		7.0								7.0	7.0	
Flash Don't Walk (s)		11.0								11.0	11.0	
Pedestrian Calls (#/hr)		0								0	0	
Act Effct Green (s)		37.7									21.3	
Actuated g/C Ratio		0.54									0.30	
v/c Ratio		0.80									0.13	
Control Delay (s/veh)		16.7									10.2	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		16.7									10.2	
LOS		B									B	
Approach Delay (s/veh)		16.7									10.2	
Approach LOS		B									B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay (s/veh): 16.2		Intersection LOS: B	
Intersection Capacity Utilization 56.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 40: McHard Road



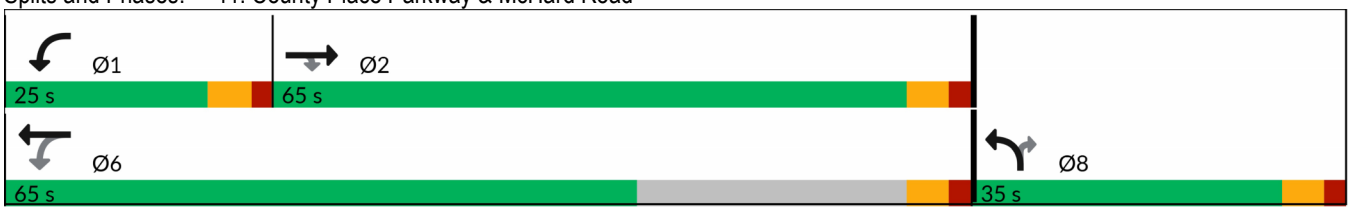


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1236	898	173	1020	321	152
Future Volume (vph)	1236	898	173	1020	321	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	120		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		0	
Lane Util. Factor	0.91	0.91	1.00	0.95	1.00	1.00
Frt	0.975	0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3305	1441	1770	3539	1770	1583
Flt Permitted			0.061		0.950	
Satd. Flow (perm)	3305	1441	114	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	24	686				165
Link Speed (mph)	30			30	30	
Link Distance (ft)	975			186	512	
Travel Time (s)	22.2			4.2	11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1343	976	188	1109	349	165
Shared Lane Traffic (%)		28%				
Lane Group Flow (vph)	1616	703	188	1109	349	165
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	3.0	20.0	5.0	5.0
Minimum Split (s)	65.0	65.0	20.0	45.0	25.0	25.0
Total Split (s)	65.0	65.0	25.0	65.0	35.0	35.0
Total Split (%)	52.0%	52.0%	20.0%	52.0%	28.0%	28.0%
Maximum Green (s)	59.0	59.0	19.0	59.0	29.0	29.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	59.1	59.1	78.4	78.4	29.0	29.0
Actuated g/C Ratio	0.49	0.49	0.66	0.66	0.24	0.24
v/c Ratio	0.98	0.66	0.73	0.48	0.81	0.32
Control Delay (s/veh)	48.2	5.2	42.4	11.0	59.3	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.2	5.2	42.4	11.0	59.3	7.6
LOS	D	A	D	B	E	A
Approach Delay (s/veh)	35.1			15.6	42.7	
Approach LOS	D			B	D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 119.4			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay (s/veh): 29.9		Intersection LOS: C	
Intersection Capacity Utilization 86.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 41: County Place Parkway & McHard Road

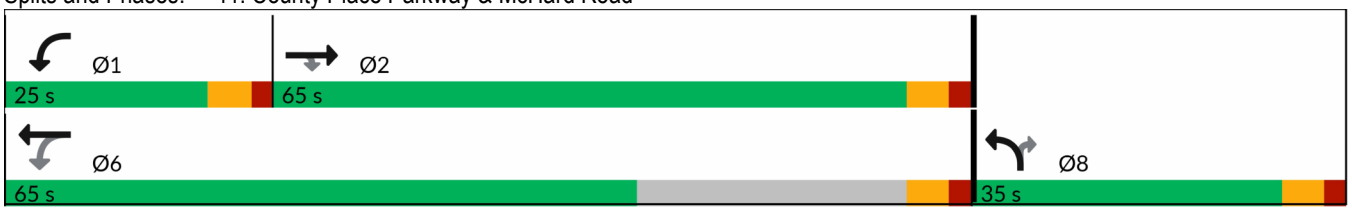


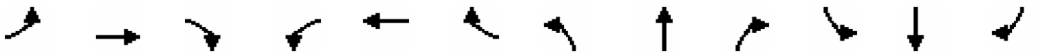
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	628	474	188	829	253	93
Future Volume (vph)	628	474	188	829	253	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	120		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		0	
Lane Util. Factor	0.91	0.91	1.00	0.95	1.00	1.00
Frt	0.973	0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3299	1441	1770	3539	1770	1583
Flt Permitted			0.158		0.950	
Satd. Flow (perm)	3299	1441	294	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	26	366				101
Link Speed (mph)	30			30	30	
Link Distance (ft)	975			186	512	
Travel Time (s)	22.2			4.2	11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	683	515	204	901	275	101
Shared Lane Traffic (%)		29%				
Lane Group Flow (vph)	832	366	204	901	275	101
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	3.0	20.0	5.0	5.0
Minimum Split (s)	65.0	65.0	20.0	45.0	25.0	25.0
Total Split (s)	65.0	65.0	25.0	65.0	35.0	35.0
Total Split (%)	52.0%	52.0%	20.0%	52.0%	28.0%	28.0%
Maximum Green (s)	59.0	59.0	19.0	59.0	29.0	29.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	32.5	32.5	49.3	49.3	29.4	29.4
Actuated g/C Ratio	0.36	0.36	0.54	0.54	0.32	0.32
v/c Ratio	0.70	0.49	0.61	0.47	0.48	0.17
Control Delay (s/veh)	27.2	4.5	18.9	13.2	30.6	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.2	4.5	18.9	13.2	30.6	6.8
LOS	C	A	B	B	C	A
Approach Delay (s/veh)	20.3			14.2	24.2	
Approach LOS	C			B	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 90.9			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 18.3		Intersection LOS: B	
Intersection Capacity Utilization 61.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 41: County Place Parkway & McHard Road



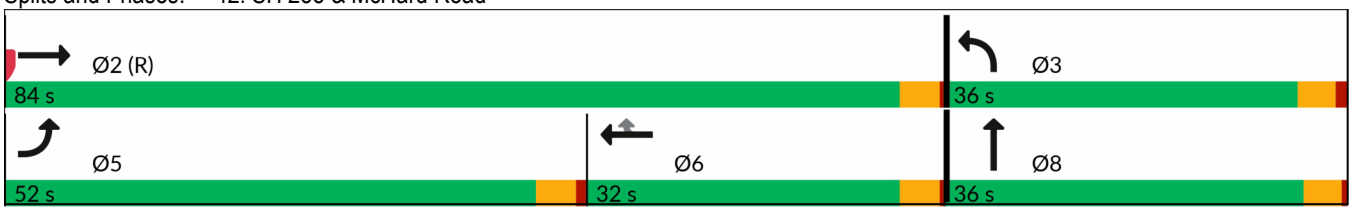


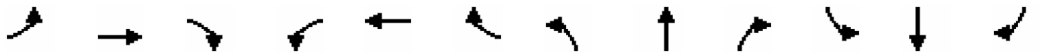
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	789	938	0	0	708	490	795	311	150	0	0	0
Future Volume (vph)	789	938	0	0	708	490	795	311	150	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt						0.850		0.951				
Flt Protected	0.950	0.990					0.950					
Satd. Flow (prot)	1610	3356	0	0	5085	1583	1770	3366	0	0	0	0
Flt Permitted	0.950	0.534					0.950					
Satd. Flow (perm)	1610	1810	0	0	5085	1583	1770	3366	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						119		66				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		505			975			278			566	
Travel Time (s)		11.5			22.2			6.3			12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	858	1020	0	0	770	533	864	338	163	0	0	0
Shared Lane Traffic (%)	29%											
Lane Group Flow (vph)	609	1269	0	0	770	533	864	501	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Prot	NA				
Protected Phases	5	2			6		3	8				
Permitted Phases						6						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2			6	6	3	8				
Switch Phase												
Minimum Initial (s)	5.0	4.0			4.0	4.0	5.0	4.0				
Minimum Split (s)	9.5	20.0			20.0	20.0	9.5	20.0				
Total Split (s)	52.0	84.0			32.0	32.0	36.0	36.0				
Total Split (%)	43.3%	70.0%			26.7%	26.7%	30.0%	30.0%				
Maximum Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5				
All-Red Time (s)	1.0	0.5			0.5	0.5	1.0	0.5				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	4.0			4.0	4.0	4.5	4.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	None	C-Max			None	None	None	Max				
Walk Time (s)		5.0			5.0	5.0		5.0				
Flash Don't Walk (s)		11.0			11.0	11.0		11.0				
Pedestrian Calls (#/hr)		0			0	0		0				
Act Effct Green (s)	46.7	80.0			28.8	28.8	31.5	32.0				
Actuated g/C Ratio	0.39	0.67			0.24	0.24	0.26	0.27				
v/c Ratio	0.97	0.96			0.63	1.14	1.86	0.53				
Control Delay (s/veh)	66.1	52.1			43.8	117.4	423.8	34.7				
Queue Delay	35.1	42.9			0.0	0.0	0.0	0.0				
Total Delay (s/veh)	101.2	95.0			43.8	117.4	423.8	34.7				
LOS	F	F			D	F	F	C				
Approach Delay (s/veh)		97.0			73.9			281.0				
Approach LOS		F			E			F				

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.86			
Intersection Signal Delay (s/veh): 145.6		Intersection LOS: F	
Intersection Capacity Utilization 83.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 42: SH 288 & McHard Road



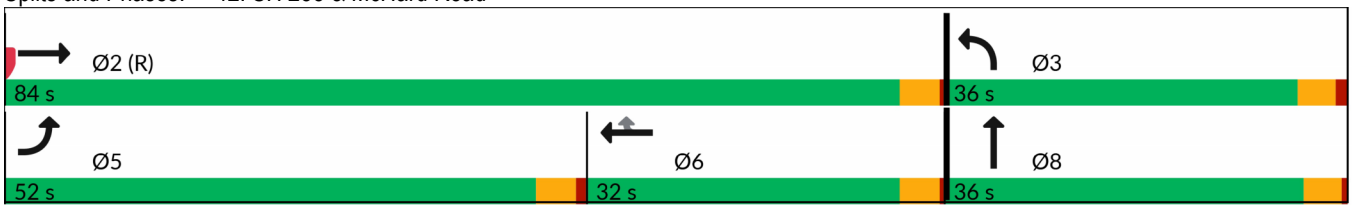


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	913	1901	0	0	737	508	573	389	192	0	0	0
Future Volume (vph)	913	1901	0	0	737	508	573	389	192	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt						0.850		0.950				
Flt Protected	0.950	0.998					0.950					
Satd. Flow (prot)	1610	3383	0	0	5085	1583	1770	3362	0	0	0	0
Flt Permitted	0.950	0.709					0.950					
Satd. Flow (perm)	1610	2404	0	0	5085	1583	1770	3362	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						77		69				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		505			975			278			566	
Travel Time (s)		11.5			22.2			6.3			12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	992	2066	0	0	801	552	623	423	209	0	0	0
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	893	2165	0	0	801	552	623	632	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Prot	NA				
Protected Phases	5	2			6		3	8				
Permitted Phases						6						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2			6	6	3	8				
Switch Phase												
Minimum Initial (s)	5.0	4.0			4.0	4.0	5.0	4.0				
Minimum Split (s)	9.5	20.0			20.0	20.0	9.5	20.0				
Total Split (s)	52.0	84.0			32.0	32.0	36.0	36.0				
Total Split (%)	43.3%	70.0%			26.7%	26.7%	30.0%	30.0%				
Maximum Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5				
All-Red Time (s)	1.0	0.5			0.5	0.5	1.0	0.5				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	4.0			4.0	4.0	4.5	4.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	None	C-Max			None	None	None	Max				
Walk Time (s)		5.0			5.0	5.0		5.0				
Flash Don't Walk (s)		11.0			11.0	11.0		11.0				
Pedestrian Calls (#/hr)		0			0	0		0				
Act Effct Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
Actuated g/C Ratio	0.40	0.67			0.23	0.23	0.26	0.27				
v/c Ratio	1.40	1.43			0.68	1.29	1.34	0.67				
Control Delay (s/veh)	220.9	223.4			45.2	180.1	204.1	38.8				
Queue Delay	0.6	0.3			0.0	0.0	0.0	0.0				
Total Delay (s/veh)	221.5	223.7			45.2	180.1	204.1	38.8				
LOS	F	F			D	F	F	D				
Approach Delay (s/veh)		223.0			100.2			120.8				
Approach LOS		F			F			F				

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.43			
Intersection Signal Delay (s/veh): 171.1		Intersection LOS: F	
Intersection Capacity Utilization 149.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 42: SH 288 & McHard Road

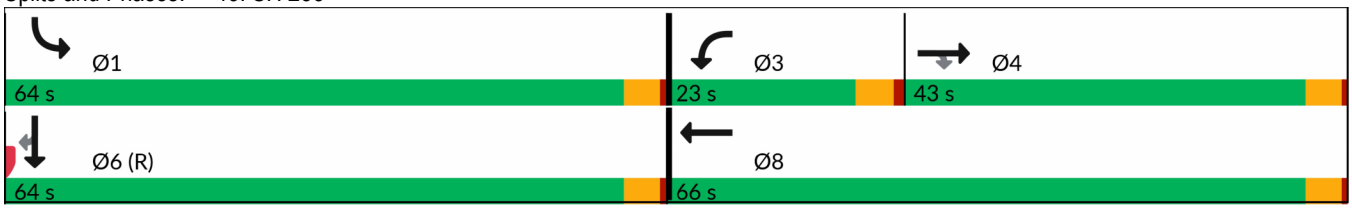


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1261	414	222	1314	0	0	0	0	456	318	650
Future Volume (vph)	0	1261	414	222	1314	0	0	0	0	456	318	650
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			248									46
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		807			505			209			785	
Travel Time (s)		18.3			11.5			4.8			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1371	450	241	1428	0	0	0	0	496	346	707
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1371	450	241	1428	0	0	0	0	496	346	707
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8					1	6	6
Switch Phase												
Minimum Initial (s)		4.0	4.0	5.0	4.0					4.0	4.0	4.0
Minimum Split (s)		20.0	20.0	9.5	20.0					20.0	20.0	20.0
Total Split (s)		43.0	43.0	23.0	66.0					64.0	64.0	64.0
Total Split (%)		33.1%	33.1%	17.7%	50.8%					49.2%	49.2%	49.2%
Maximum Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		0.5	0.5	1.0	0.5					0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0	4.5	4.0					4.0	4.0	4.0
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		None	None	None	None					Max	C-Max	C-Max
Walk Time (s)		5.0	5.0		5.0					5.0	5.0	5.0
Flash Don't Walk (s)		11.0	11.0		11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0					0	0	0
Act Effct Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
Actuated g/C Ratio		0.30	0.30	0.14	0.48					0.46	0.46	0.46
v/c Ratio		0.90	0.69	0.96	0.85					0.61	0.21	0.94
Control Delay (s/veh)		52.6	23.7	102.7	35.8					30.1	21.3	52.1
Queue Delay		0.0	0.0	0.0	47.6					0.0	0.0	0.0
Total Delay (s/veh)		52.6	23.7	102.7	83.3					30.1	21.3	52.1
LOS		D	C	F	F					C	C	D
Approach Delay (s/veh)		45.5			86.1						38.2	
Approach LOS		D			F						D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay (s/veh): 56.7		Intersection LOS: E	
Intersection Capacity Utilization 83.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 43: SH 288

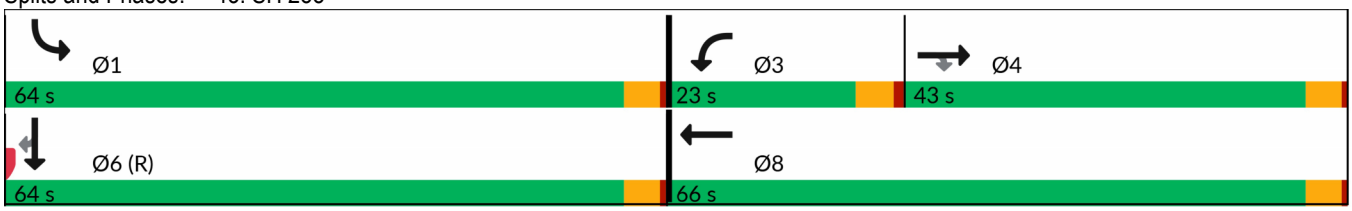


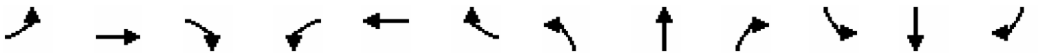
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1858	588	321	1220	0	0	0	0	1002	660	647
Future Volume (vph)	0	1858	588	321	1220	0	0	0	0	1002	660	647
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117									46
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		807			505			209			785	
Travel Time (s)		18.3			11.5			4.8			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2020	639	349	1326	0	0	0	0	1089	717	703
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2020	639	349	1326	0	0	0	0	1089	717	703
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8					1	6	6
Switch Phase												
Minimum Initial (s)		4.0	4.0	5.0	4.0					4.0	4.0	4.0
Minimum Split (s)		20.0	20.0	9.5	20.0					20.0	20.0	20.0
Total Split (s)		43.0	43.0	23.0	66.0					64.0	64.0	64.0
Total Split (%)		33.1%	33.1%	17.7%	50.8%					49.2%	49.2%	49.2%
Maximum Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		0.5	0.5	1.0	0.5					0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0	4.5	4.0					4.0	4.0	4.0
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		None	None	None	None					Max	C-Max	C-Max
Walk Time (s)		5.0	5.0		5.0					5.0	5.0	5.0
Flash Don't Walk (s)		11.0	11.0		11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0					0	0	0
Act Effct Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
Actuated g/C Ratio		0.30	0.30	0.14	0.48					0.46	0.46	0.46
v/c Ratio		1.32	1.15	1.39	0.79					1.33	0.44	0.93
Control Delay (s/veh)		187.7	120.5	239.2	32.6					189.8	24.7	51.3
Queue Delay		0.0	0.0	0.0	36.1					0.0	0.0	0.0
Total Delay (s/veh)		187.7	120.5	239.2	68.7					189.8	24.7	51.3
LOS		F	F	F	E					F	C	D
Approach Delay (s/veh)		171.6			104.2						103.8	
Approach LOS		F			F						F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.39			
Intersection Signal Delay (s/veh): 130.2		Intersection LOS: F	
Intersection Capacity Utilization 149.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 43: SH 288



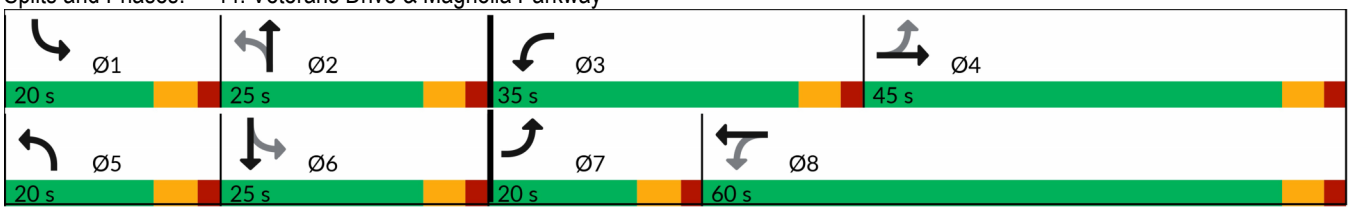


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	787	124	169	453	108	182	232	358	120	127	74
Future Volume (vph)	62	787	124	169	453	108	182	232	358	120	127	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	220		150	120		150	80		80
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.980			0.971			0.909			0.945	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3437	0	1770	3217	0	1770	3345	0
Flt Permitted	0.411			0.105			0.574			0.223		
Satd. Flow (perm)	766	3468	0	196	3437	0	1069	3217	0	415	3345	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			29			264			78	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3334			4203			1951			5273	
Travel Time (s)		75.8			95.5			44.3			119.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	855	135	184	492	117	198	252	389	130	138	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	990	0	184	609	0	198	641	0	130	218	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0		3.0	7.0		10.0	5.0		10.0	5.0	
Minimum Split (s)	20.0	45.0		35.0	40.0		20.0	25.0		20.0	25.0	
Total Split (s)	20.0	45.0		35.0	60.0		20.0	25.0		20.0	25.0	
Total Split (%)	16.0%	36.0%		28.0%	48.0%		16.0%	20.0%		16.0%	20.0%	
Maximum Green (s)	14.0	39.0		29.0	54.0		14.0	19.0		14.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.0	35.5		53.0	43.2		31.9	19.1		29.3	17.9	
Actuated g/C Ratio	0.42	0.35		0.52	0.42		0.31	0.19		0.29	0.17	
v/c Ratio	0.17	0.82		0.63	0.42		0.47	0.79		0.48	0.34	
Control Delay (s/veh)	13.7	37.2		27.3	21.6		30.0	32.1		31.5	26.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	13.7	37.2		27.3	21.6		30.0	32.1		31.5	26.8	
LOS	B	D		C	C		C	C		C	C	
Approach Delay (s/veh)		35.7			22.9			31.6			28.6	
Approach LOS		D			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 102.7			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 30.4		Intersection LOS: C	
Intersection Capacity Utilization 79.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 44: Veterans Drive & Magnoila Parkway

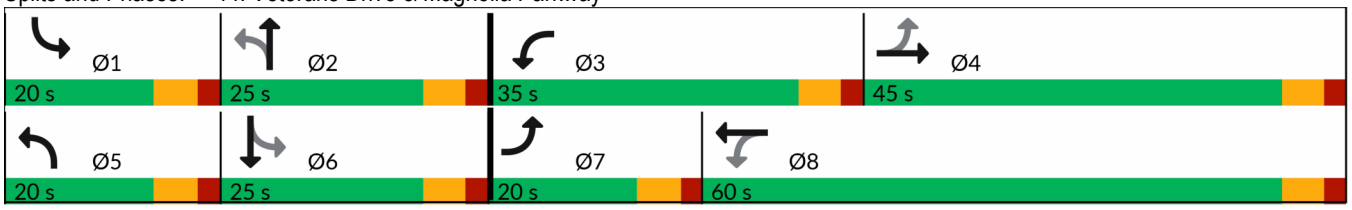


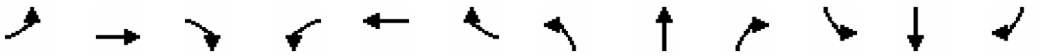
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	601	115	275	901	93	74	148	209	133	332	115
Future Volume (vph)	53	601	115	275	901	93	74	148	209	133	332	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	220		150	120		150	80		80
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.976			0.986			0.912			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3490	0	1770	3228	0	1770	3401	0
Flt Permitted	0.163			0.151			0.392			0.342		
Satd. Flow (perm)	304	3454	0	281	3490	0	730	3228	0	637	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			11			227			32	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3334			4203			1951			5273	
Travel Time (s)		75.8			95.5			44.3			119.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	58	653	125	299	979	101	80	161	227	145	361	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	778	0	299	1080	0	80	388	0	145	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0		3.0	7.0		10.0	5.0		10.0	5.0	
Minimum Split (s)	20.0	45.0		35.0	40.0		20.0	25.0		20.0	25.0	
Total Split (s)	20.0	45.0		35.0	60.0		20.0	25.0		20.0	25.0	
Total Split (%)	16.0%	36.0%		28.0%	48.0%		16.0%	20.0%		16.0%	20.0%	
Maximum Green (s)	14.0	39.0		29.0	54.0		14.0	19.0		14.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	37.2	30.0		52.8	42.3		30.0	19.3		33.9	24.5	
Actuated g/C Ratio	0.36	0.29		0.52	0.41		0.29	0.19		0.33	0.24	
v/c Ratio	0.27	0.76		0.77	0.75		0.25	0.49		0.42	0.58	
Control Delay (s/veh)	17.2	37.8		33.1	29.3		27.6	19.0		29.6	39.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	17.2	37.8		33.1	29.3		27.6	19.0		29.6	39.2	
LOS	B	D		C	C		C	B		C	D	
Approach Delay (s/veh)		36.4			30.2			20.4			37.0	
Approach LOS		D			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 102.3			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 31.6		Intersection LOS: C	
Intersection Capacity Utilization 76.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 44: Veterans Drive & Magnoila Parkway



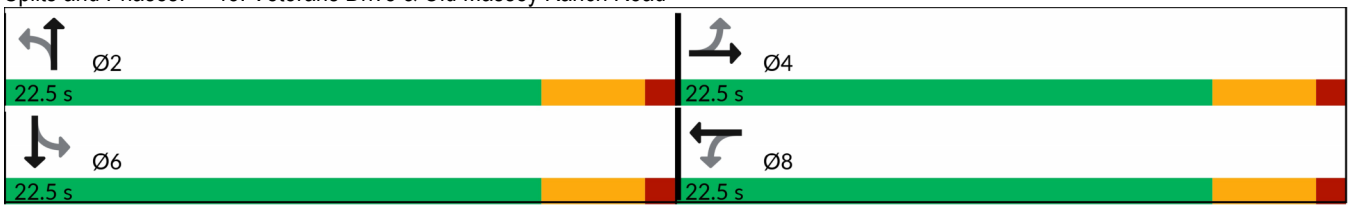


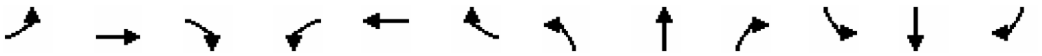
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	95	1	148	3	150	342	1	6	138	22
Future Volume (vph)	33	0	95	1	148	3	150	342	1	6	138	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.850			0.997						0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3008	0	1770	3529	0	1770	3539	0	1770	3465	0
Flt Permitted							0.642			0.530		
Satd. Flow (perm)	1863	3008	0	1863	3529	0	1196	3539	0	987	3465	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		676			3			1			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1272			1116			5316			5367	
Travel Time (s)		28.9			25.4			120.8			122.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	0	103	1	161	3	163	372	1	7	150	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	103	0	1	164	0	163	373	0	7	174	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	6.7	6.7		6.8	6.8		17.2	17.2		17.2	17.2	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.66	0.66		0.66	0.66	
v/c Ratio	0.08	0.08		0.00	0.18		0.21	0.16		0.01	0.08	
Control Delay (s/veh)	9.1	0.1		9.0	8.7		5.7	4.3		4.7	3.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.1	0.1		9.0	8.7		5.7	4.3		4.7	3.9	
LOS	A	A		A	A		A	A		A	A	
Approach Delay (s/veh)		2.4			8.7			4.7			3.9	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 26.2			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.21			
Intersection Signal Delay (s/veh): 4.9		Intersection LOS: A	
Intersection Capacity Utilization 37.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 45: Veterans Drive & Old Massey Ranch Road



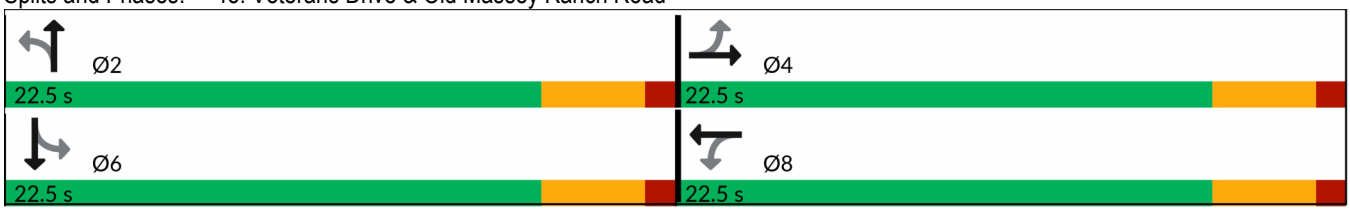


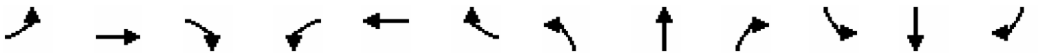
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	4	172	1	1	1	99	275	1	4	466	30
Future Volume (vph)	40	4	172	1	1	1	99	275	1	4	466	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.853			0.925			0.999			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3019	0	1770	3274	0	1770	3536	0	1770	3507	0
Flt Permitted	0.756			0.755			0.451			0.569		
Satd. Flow (perm)	1408	3019	0	1406	3274	0	840	3536	0	1060	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		208			416			1			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1272			1116			5316			5367	
Travel Time (s)		28.9			25.4			120.8			122.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	4	187	1	1	1	108	299	1	4	507	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	191	0	1	2	0	108	300	0	4	540	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	6.5	6.5		6.5	6.5		15.4	15.4		15.4	15.4	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.55	0.55		0.55	0.55	
v/c Ratio	0.13	0.22		0.00	0.00		0.23	0.15		0.01	0.28	
Control Delay (s/veh)	9.7	2.5		9.0	0.0		6.9	4.9		4.8	5.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.7	2.5		9.0	0.0		6.9	4.9		4.8	5.1	
LOS	A	A		A	A		A	A		A	A	
Approach Delay (s/veh)		3.8			3.0			5.4			5.1	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 27.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay (s/veh): 5.0		Intersection LOS: A	
Intersection Capacity Utilization 39.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 45: Veterans Drive & Old Massey Ranch Road



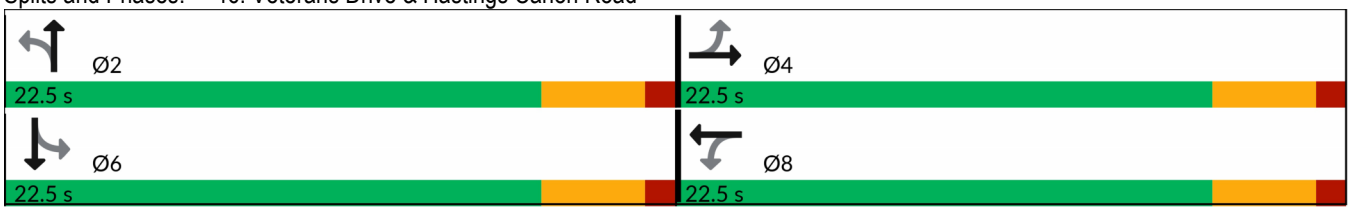


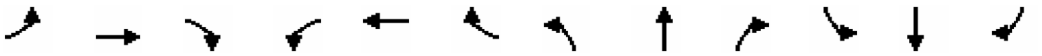
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	15	33	93	13	157	10	299	126	98	123	6
Future Volume (vph)	33	15	33	93	13	157	10	299	126	98	123	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.896			0.861			0.956			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3171	0	1770	3047	0	1770	3383	0	1770	3514	0
Flt Permitted	0.635			0.721			0.663			0.486		
Satd. Flow (perm)	1183	3171	0	1343	3047	0	1235	3383	0	905	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			171			137			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1459			1916			1299			5316	
Travel Time (s)		33.2			43.5			29.5			120.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	16	36	101	14	171	11	325	137	107	134	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	52	0	101	185	0	11	462	0	107	141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	7.7	7.7		7.7	7.7		13.3	13.3		13.3	13.3	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.49	0.49		0.49	0.49	
v/c Ratio	0.11	0.06		0.26	0.19		0.02	0.27		0.24	0.08	
Control Delay (s/veh)	8.2	4.4		9.6	2.7		6.1	4.8		8.4	5.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	8.2	4.4		9.6	2.7		6.1	4.8		8.4	5.9	
LOS	A	A		A	A		A	A		A	A	
Approach Delay (s/veh)		6.0			5.1			4.8			7.0	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 27			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.27			
Intersection Signal Delay (s/veh): 5.5		Intersection LOS: A	
Intersection Capacity Utilization 42.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 46: Veterans Drive & Hastings Canon Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	15	12	118	16	112	15	188	108	169	335	41
Future Volume (vph)	19	15	12	118	16	112	15	188	108	169	335	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.933			0.868			0.945			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3302	0	1770	3072	0	1770	3345	0	1770	3479	0
Flt Permitted	0.664			0.737			0.512			0.557		
Satd. Flow (perm)	1237	3302	0	1373	3072	0	954	3345	0	1038	3479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			122			117			35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1459			1916			1299			5316	
Travel Time (s)		33.2			43.5			29.5			120.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	16	13	128	17	122	16	204	117	184	364	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	29	0	128	139	0	16	321	0	184	409	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	8.5	8.5		8.5	8.5		16.6	16.6		16.6	16.6	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.54	0.54		0.54	0.54	
v/c Ratio	0.06	0.03		0.34	0.15		0.03	0.17		0.33	0.22	
Control Delay (s/veh)	9.3	6.8		12.1	3.6		6.2	4.2		8.9	5.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.3	6.8		12.1	3.6		6.2	4.2		8.9	5.7	
LOS	A	A		B	A		A	A		A	A	
Approach Delay (s/veh)		7.8			7.7			4.3			6.7	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 30.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.34			
Intersection Signal Delay (s/veh): 6.3		Intersection LOS: A	
Intersection Capacity Utilization 43.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 46: Veterans Drive & Hastings Canon Road

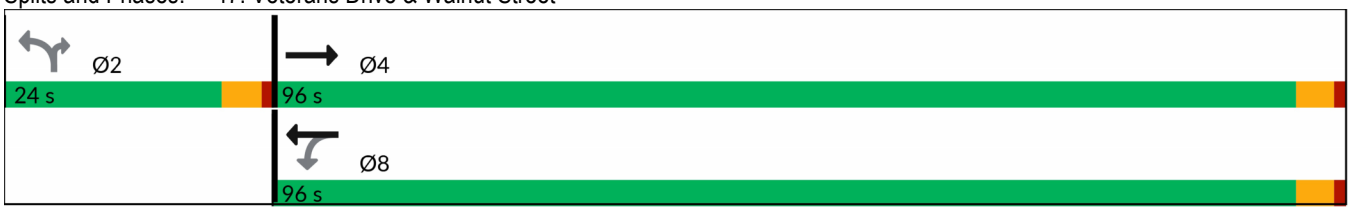


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	377	58	161	181	187	394
Future Volume (vph)	377	58	161	181	187	394
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		120	150		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			0		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.980					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3468	0	1770	3539	1770	1583
Flt Permitted			0.481		0.950	
Satd. Flow (perm)	3468	0	896	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	43					428
Link Speed (mph)	30			30	30	
Link Distance (ft)	601			563	5273	
Travel Time (s)	13.7			12.8	119.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	410	63	175	197	203	428
Shared Lane Traffic (%)						
Lane Group Flow (vph)	473	0	175	197	203	428
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases			8		2	2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	96.0		96.0	96.0	24.0	24.0
Total Split (%)	80.0%		80.0%	80.0%	20.0%	20.0%
Maximum Green (s)	91.5		91.5	91.5	19.5	19.5
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Min	Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Don't Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effct Green (s)	12.9		12.9	12.9	9.5	9.5
Actuated g/C Ratio	0.41		0.41	0.41	0.30	0.30
v/c Ratio	0.33		0.48	0.14	0.38	0.55
Control Delay (s/veh)	6.5		12.3	6.2	12.3	4.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.5		12.3	6.2	12.3	4.7
LOS	A		B	A	B	A
Approach Delay (s/veh)	6.5			9.1	7.2	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 31.7			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 7.4		Intersection LOS: A	
Intersection Capacity Utilization 44.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 47: Veterans Drive & Walnut Street

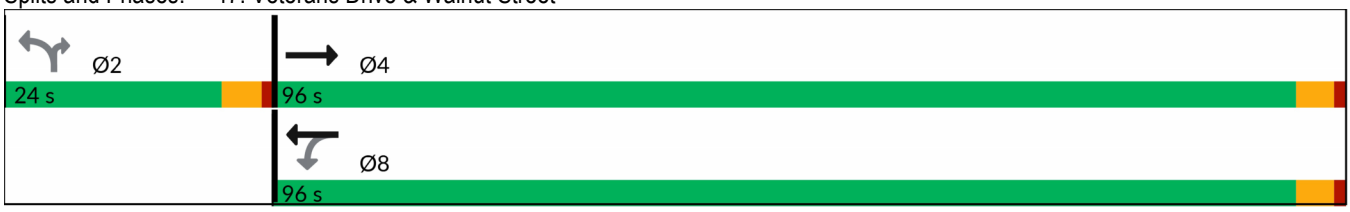


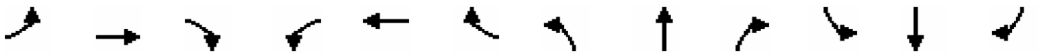
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	395	224	518	266	77	269
Future Volume (vph)	395	224	518	266	77	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		120	150		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			0		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.946					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3348	0	1770	3539	1770	1583
Flt Permitted			0.395		0.950	
Satd. Flow (perm)	3348	0	736	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	243					292
Link Speed (mph)	30			30	30	
Link Distance (ft)	601			563	5273	
Travel Time (s)	13.7			12.8	119.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	429	243	563	289	84	292
Shared Lane Traffic (%)						
Lane Group Flow (vph)	672	0	563	289	84	292
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases			8		2	2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	96.0		96.0	96.0	24.0	24.0
Total Split (%)	80.0%		80.0%	80.0%	20.0%	20.0%
Maximum Green (s)	91.5		91.5	91.5	19.5	19.5
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Min	Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Don't Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effct Green (s)	91.6		91.6	91.6	10.8	10.8
Actuated g/C Ratio	0.82		0.82	0.82	0.10	0.10
v/c Ratio	0.24		0.93	0.10	0.49	0.70
Control Delay (s/veh)	1.7		34.5	2.2	57.3	15.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	1.7		34.5	2.2	57.3	15.1
LOS	A		C	A	E	B
Approach Delay (s/veh)	1.7			23.6	24.5	
Approach LOS	A			C	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 111.4			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay (s/veh): 16.0		Intersection LOS: B	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 47: Veterans Drive & Walnut Street



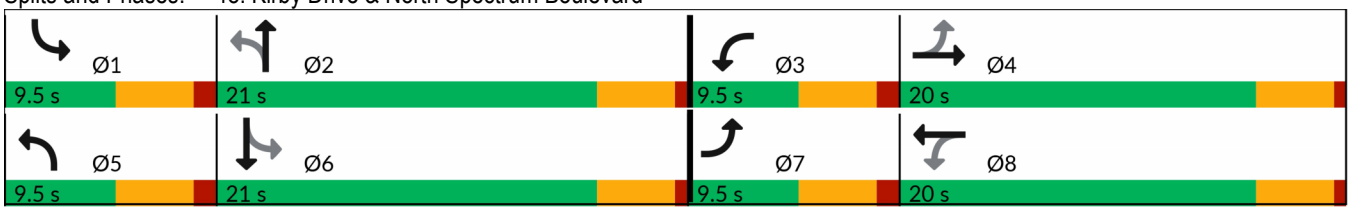


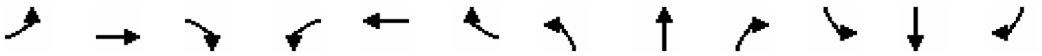
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	0	46	0	0	1	86	996	0	9	721	176
Future Volume (vph)	19	0	46	0	0	1	86	996	0	9	721	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	60		0	120		150	120		150	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.850			0.850						0.971	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1770	3008	0	1863	3008	0	1770	3539	0	1770	3437	0
Flt Permitted	0.625						0.220			0.230		
Satd. Flow (perm)	1164	3008	0	1863	3008	0	410	3539	0	428	3437	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		420			387						50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1082			1201			1142			806	
Travel Time (s)		24.6			27.3			26.0			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	0	50	0	0	1	93	1083	0	10	784	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	50	0	0	1	0	93	1083	0	10	975	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		17			17			32			32	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		9.5	20.0		9.5	21.0		9.5	21.0	
Total Split (%)	15.8%	33.3%		15.8%	33.3%		15.8%	35.0%		15.8%	35.0%	
Maximum Green (s)	5.0	16.0		5.0	16.0		5.0	17.0		5.0	17.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.6	7.1			5.6		28.8	31.2		26.8	26.1	
Actuated g/C Ratio	0.17	0.18			0.14		0.74	0.80		0.69	0.67	
v/c Ratio	0.08	0.06			0.00		0.19	0.38		0.02	0.42	
Control Delay (s/veh)	14.2	0.1			0.0		4.5	7.4		4.3	8.6	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	14.2	0.1			0.0		4.5	7.4		4.3	8.6	
LOS	B	A			A		A	A		A	A	
Approach Delay (s/veh)		4.3						7.2			8.6	
Approach LOS		A						A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 38.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay (s/veh): 7.7		Intersection LOS: A	
Intersection Capacity Utilization 49.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 48: Kirby Drive & North Spectrum Boulevard



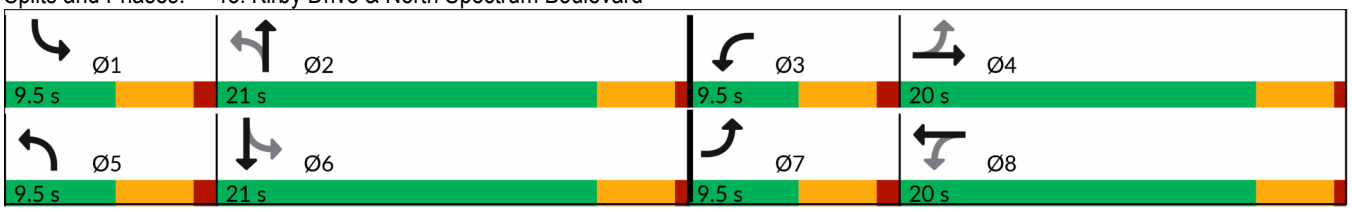


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	207	3	135	0	1	19	46	958	3	0	826	182
Future Volume (vph)	207	3	135	0	1	19	46	958	3	0	826	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	60		0	120		150	120		150	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.853			0.857						0.973	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1770	3019	0	1863	3033	0	1770	3539	0	1863	3444	0
Flt Permitted	0.741						0.163					
Satd. Flow (perm)	1380	3019	0	1863	3033	0	304	3539	0	1863	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		413			279						44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1082			1201			1142			806	
Travel Time (s)		24.6			27.3			26.0			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	225	3	147	0	1	21	50	1041	3	0	898	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	225	150	0	0	22	0	50	1044	0	0	1096	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		17			17			32			32	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		9.5	20.0		9.5	21.0		9.5	21.0	
Total Split (%)	15.8%	33.3%		15.8%	33.3%		15.8%	35.0%		15.8%	35.0%	
Maximum Green (s)	5.0	16.0		5.0	16.0		5.0	17.0		5.0	17.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.7	7.2			5.7		22.9	23.4			20.0	
Actuated g/C Ratio	0.17	0.19			0.15		0.59	0.60			0.51	
v/c Ratio	0.78	0.17			0.03		0.13	0.49			0.61	
Control Delay (s/veh)	36.7	0.4			0.1		5.1	5.8			11.8	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay (s/veh)	36.7	0.4			0.1		5.1	5.8			11.8	
LOS	D	A			A		A	A			B	
Approach Delay (s/veh)		22.2			0.1			5.8			11.8	
Approach LOS		C			A			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 38.9			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 10.7		Intersection LOS: B	
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 48: Kirby Drive & North Spectrum Boulevard



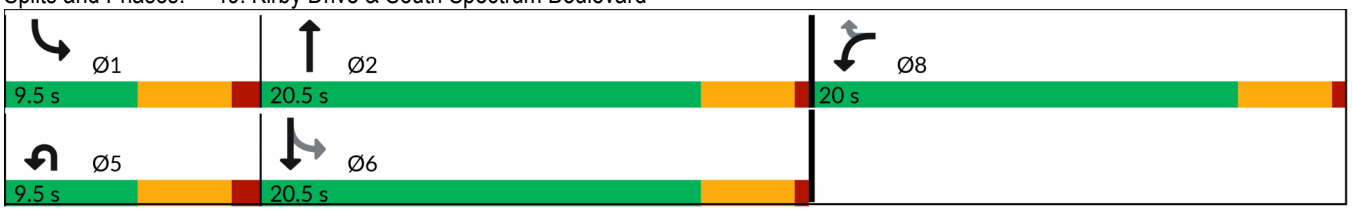


Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	56	21	25	1060	21	13	743
Future Volume (vph)	56	21	25	1060	21	13	743
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	150		150	120	
Storage Lanes	0	0	1		0	1	
Taper Length (ft)	25		25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850		0.997			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	1583	1770	3529	0	1770	3539
Flt Permitted	0.950		0.950			0.191	
Satd. Flow (perm)	1770	1583	1770	3529	0	356	3539
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		23		4			
Link Speed (mph)	30			30			30
Link Distance (ft)	1050			764			1142
Travel Time (s)	23.9			17.4			26.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	23	27	1152	23	14	808
Shared Lane Traffic (%)							
Lane Group Flow (vph)	61	23	27	1175	0	14	808
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	R NA	Left	Right	Left	Left
Median Width(ft)	12			12			12
Link Offset(ft)	0			0			0
Crosswalk Width(ft)	16			16			16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9		9	15	
Number of Detectors	1	1	1	2		1	2
Detector Template	Left	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)				94			94
Detector 2 Size(ft)				6			6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Prot	NA		pm+pt	NA
Protected Phases	8		5	2		1	6
Permitted Phases		8				6	

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Detector Phase	8	8	5	2		1	6
Switch Phase							
Minimum Initial (s)	4.0	4.0	5.0	4.0		5.0	4.0
Minimum Split (s)	20.0	20.0	9.5	20.0		9.5	20.0
Total Split (s)	20.0	20.0	9.5	20.5		9.5	20.5
Total Split (%)	40.0%	40.0%	19.0%	41.0%		19.0%	41.0%
Maximum Green (s)	16.0	16.0	5.0	16.5		5.0	16.5
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	1.0	0.5		1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.0		4.5	4.0
Lead/Lag			Lead	Lag		Lead	Lag
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	Max		None	None
Walk Time (s)	5.0	5.0		5.0			5.0
Flash Don't Walk (s)	11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0		0			0
Act Effct Green (s)	6.8	6.8	5.0	27.6		26.3	27.6
Actuated g/C Ratio	0.18	0.18	0.13	0.72		0.69	0.72
v/c Ratio	0.19	0.08	0.12	0.46		0.03	0.32
Control Delay (s/veh)	15.2	7.6	17.0	7.8		3.8	5.4
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	15.2	7.6	17.0	7.8		3.8	5.4
LOS	B	A	B	A		A	A
Approach Delay (s/veh)	13.1			8.0			5.4
Approach LOS	B			A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 38.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay (s/veh): 7.2		Intersection LOS: A	
Intersection Capacity Utilization 40.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 49: Kirby Drive & South Spectrum Boulevard



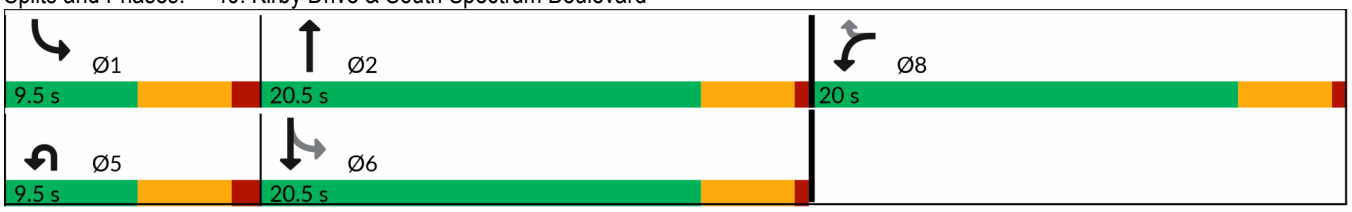


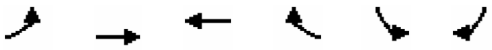
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	78	52	3	912	47	47	912
Future Volume (vph)	78	52	3	912	47	47	912
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	150		150	120	
Storage Lanes	0	0	1		0	1	
Taper Length (ft)	25		25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850		0.993			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	1583	1770	3514	0	1770	3539
Flt Permitted	0.950		0.950			0.219	
Satd. Flow (perm)	1770	1583	1770	3514	0	408	3539
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		57		11			
Link Speed (mph)	30			30			30
Link Distance (ft)	1050			764			1142
Travel Time (s)	23.9			17.4			26.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	57	3	991	51	51	991
Shared Lane Traffic (%)							
Lane Group Flow (vph)	85	57	3	1042	0	51	991
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	R NA	Left	Right	Left	Left
Median Width(ft)	12			12			12
Link Offset(ft)	0			0			0
Crosswalk Width(ft)	16			16			16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9		9	15	
Number of Detectors	1	1	1	2		1	2
Detector Template	Left	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)				94			94
Detector 2 Size(ft)				6			6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Prot	NA		pm+pt	NA
Protected Phases	8		5	2		1	6
Permitted Phases		8				6	

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Detector Phase	8	8	5	2		1	6
Switch Phase							
Minimum Initial (s)	4.0	4.0	5.0	4.0		5.0	4.0
Minimum Split (s)	20.0	20.0	9.5	20.0		9.5	20.0
Total Split (s)	20.0	20.0	9.5	20.5		9.5	20.5
Total Split (%)	40.0%	40.0%	19.0%	41.0%		19.0%	41.0%
Maximum Green (s)	16.0	16.0	5.0	16.5		5.0	16.5
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	1.0	0.5		1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.0		4.5	4.0
Lead/Lag			Lead	Lag		Lead	Lag
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	Max		None	None
Walk Time (s)	5.0	5.0		5.0			5.0
Flash Don't Walk (s)	11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0		0			0
Act Effct Green (s)	7.3	7.3	5.0	25.8		26.2	27.5
Actuated g/C Ratio	0.19	0.19	0.13	0.67		0.68	0.71
v/c Ratio	0.25	0.17	0.01	0.44		0.11	0.39
Control Delay (s/veh)	15.9	6.6	17.0	8.6		4.2	6.3
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	15.9	6.6	17.0	8.6		4.2	6.3
LOS	B	A	B	A		A	A
Approach Delay (s/veh)	12.2			8.7			6.2
Approach LOS	B			A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 38.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay (s/veh): 7.7		Intersection LOS: A	
Intersection Capacity Utilization 45.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 49: Kirby Drive & South Spectrum Boulevard



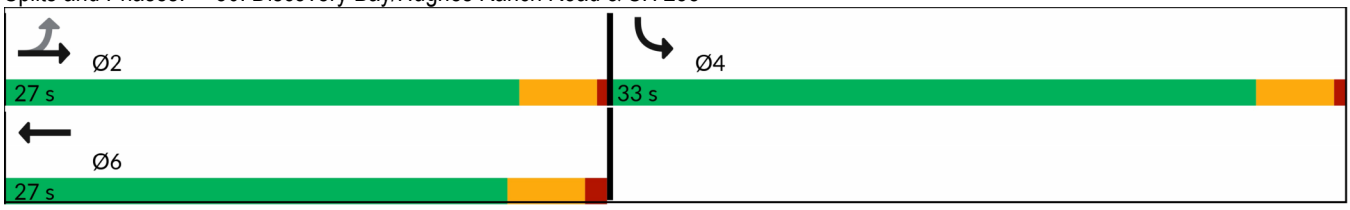


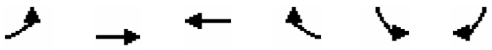
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	511	24	19	298	52	28
Future Volume (vph)	511	24	19	298	52	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	150	150
Storage Lanes	0			0	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.873		0.953	
Flt Protected		0.954			0.968	
Satd. Flow (prot)	0	1777	1626	0	1718	0
Flt Permitted		0.519			0.968	
Satd. Flow (perm)	0	967	1626	0	1718	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			324		30	
Link Speed (mph)		30	30		30	
Link Distance (ft)		769	312		2088	
Travel Time (s)		17.5	7.1		47.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	555	26	21	324	57	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	581	345	0	87	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases	2					

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6		4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	5.0		4.0	
Minimum Split (s)	20.0	20.0	22.5		20.0	
Total Split (s)	27.0	27.0	27.0		33.0	
Total Split (%)	45.0%	45.0%	45.0%		55.0%	
Maximum Green (s)	23.0	23.0	22.5		29.0	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	1.0		0.5	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.0	4.5		4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	Max		None	
Walk Time (s)	5.0	5.0	7.0		5.0	
Flash Don't Walk (s)	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0		0	
Act Effct Green (s)		36.0	35.8		7.1	
Actuated g/C Ratio		0.79	0.79		0.16	
v/c Ratio		0.76	0.26		0.30	
Control Delay (s/veh)		18.3	1.3		14.7	
Queue Delay		0.0	0.0		0.0	
Total Delay (s/veh)		18.3	1.3		14.7	
LOS		B	A		B	
Approach Delay (s/veh)		18.3	1.3		14.7	
Approach LOS		B	A		B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 45.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 12.2		Intersection LOS: B	
Intersection Capacity Utilization 64.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 50: Discovery Bay/Hughes Ranch Road & SH 288



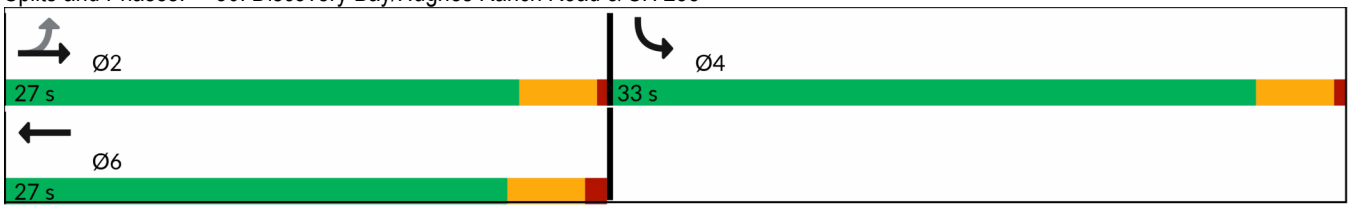


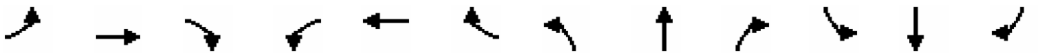
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	192	81	43	68	327	258
Future Volume (vph)	192	81	43	68	327	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	150	150
Storage Lanes	0			0	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.917		0.940	
Flt Protected		0.966			0.973	
Satd. Flow (prot)	0	1799	1708	0	1704	0
Flt Permitted		0.716			0.973	
Satd. Flow (perm)	0	1334	1708	0	1704	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			74		92	
Link Speed (mph)		30	30		30	
Link Distance (ft)		769	312		2088	
Travel Time (s)		17.5	7.1		47.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	209	88	47	74	355	280
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	297	121	0	635	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases	2					

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6		4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	5.0		4.0	
Minimum Split (s)	20.0	20.0	22.5		20.0	
Total Split (s)	27.0	27.0	27.0		33.0	
Total Split (%)	45.0%	45.0%	45.0%		55.0%	
Maximum Green (s)	23.0	23.0	22.5		29.0	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	1.0		0.5	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.0	4.5		4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	Max		None	
Walk Time (s)	5.0	5.0	7.0		5.0	
Flash Don't Walk (s)	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0		0	
Act Effct Green (s)		23.3	22.8		22.0	
Actuated g/C Ratio		0.44	0.43		0.41	
v/c Ratio		0.51	0.16		0.84	
Control Delay (s/veh)		16.8	6.5		23.1	
Queue Delay		0.0	0.0		0.0	
Total Delay (s/veh)		16.8	6.5		23.1	
LOS		B	A		C	
Approach Delay (s/veh)		16.8	6.5		23.1	
Approach LOS		B	A		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 53.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 19.4		Intersection LOS: B	
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 50: Discovery Bay/Hughes Ranch Road & SH 288



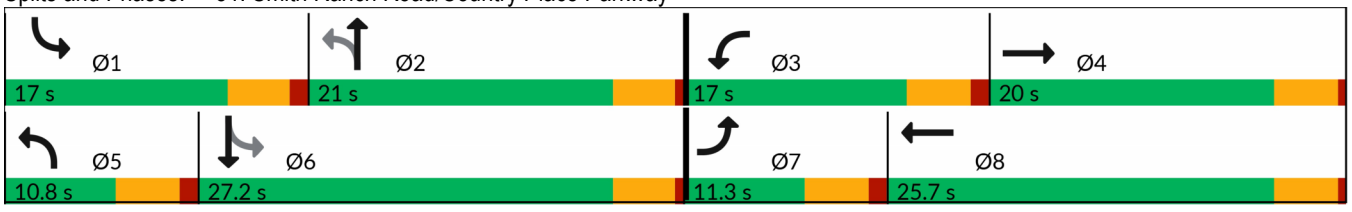


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	110	4	127	518	64	56	74	43	184	197	84
Future Volume (vph)	18	110	4	127	518	64	56	74	43	184	197	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	220		150	150		40	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.995			0.983			0.944			0.955	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3522	0	1770	3479	0	1770	3341	0	1770	3380	0
Flt Permitted	0.950			0.950			0.566			0.546		
Satd. Flow (perm)	1770	3522	0	1770	3479	0	1054	3341	0	1017	3380	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			18			47			90	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		215			3362			510			402	
Travel Time (s)		4.9			76.4			11.6			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	120	4	138	563	70	61	80	47	200	214	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	124	0	138	633	0	61	127	0	200	305	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	11.3	20.0		17.0	25.7		10.8	21.0		17.0	27.2	
Total Split (%)	15.1%	26.7%		22.7%	34.3%		14.4%	28.0%		22.7%	36.3%	
Maximum Green (s)	6.8	16.0		12.5	21.7		6.3	17.0		12.5	23.2	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.2	9.9		9.7	19.5		23.1	17.4		30.7	25.5	
Actuated g/C Ratio	0.10	0.16		0.16	0.32		0.38	0.29		0.50	0.42	
v/c Ratio	0.11	0.22		0.49	0.56		0.13	0.13		0.32	0.21	
Control Delay (s/veh)	30.4	25.0		31.8	19.5		11.3	14.1		11.8	11.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	30.4	25.0		31.8	19.5		11.3	14.1		11.8	11.3	
LOS	C	C		C	B		B	B		B	B	
Approach Delay (s/veh)		25.7			21.7			13.2			11.5	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 61			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 17.8		Intersection LOS: B	
Intersection Capacity Utilization 40.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 51: Smith Ranch Road/Country Place Parkway

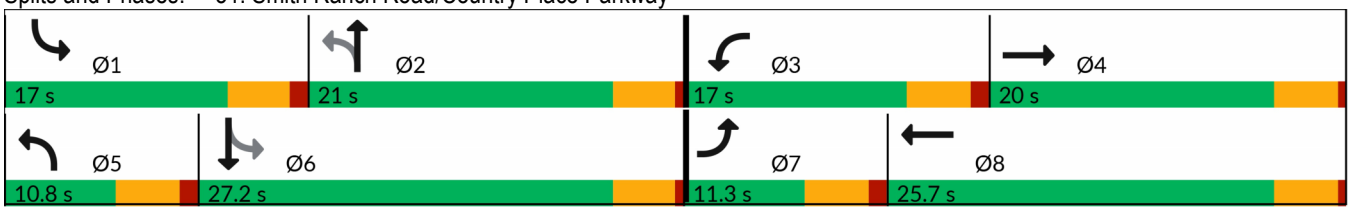


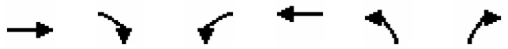
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	441	4	216	352	86	102	163	151	358	397	21
Future Volume (vph)	56	441	4	216	352	86	102	163	151	358	397	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	220		150	150		40	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.999			0.971			0.928			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3536	0	1770	3437	0	1770	3284	0	1770	3511	0
Flt Permitted	0.950			0.950			0.490			0.380		
Satd. Flow (perm)	1770	3536	0	1770	3437	0	913	3284	0	708	3511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			40			164			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		215			3362			510			402	
Travel Time (s)		4.9			76.4			11.6			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	479	4	235	383	93	111	177	164	389	432	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	483	0	235	476	0	111	341	0	389	455	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	11.3	20.0		17.0	25.7		10.8	21.0		17.0	27.2	
Total Split (%)	15.1%	26.7%		22.7%	34.3%		14.4%	28.0%		22.7%	36.3%	
Maximum Green (s)	6.8	16.0		12.5	21.7		6.3	17.0		12.5	23.2	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.5	14.3		12.0	24.3		22.7	17.0		33.3	25.3	
Actuated g/C Ratio	0.09	0.20		0.17	0.33		0.31	0.23		0.46	0.35	
v/c Ratio	0.39	0.69		0.80	0.41		0.31	0.38		0.77	0.37	
Control Delay (s/veh)	39.6	32.9		52.2	19.4		15.5	13.7		27.4	20.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	39.6	32.9		52.2	19.4		15.5	13.7		27.4	20.0	
LOS	D	C		D	B		B	B		C	B	
Approach Delay (s/veh)		33.6			30.3			14.2			23.4	
Approach LOS		C			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 72.6			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay (s/veh): 25.9		Intersection LOS: C	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 51: Smith Ranch Road/Country Place Parkway



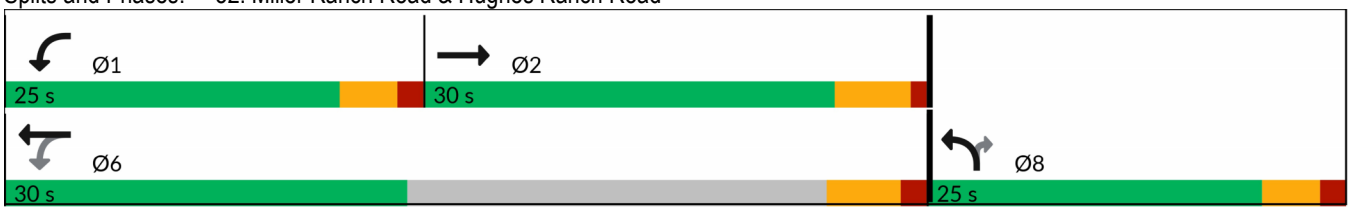


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	383	133	187	431	222	333
Future Volume (vph)	383	133	187	431	222	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	120		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.961					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3401	0	1770	3539	1770	1583
Flt Permitted			0.255		0.950	
Satd. Flow (perm)	3401	0	475	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	63					362
Link Speed (mph)	30			30	30	
Link Distance (ft)	3362			2489	974	
Travel Time (s)	76.4			56.6	22.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	416	145	203	468	241	362
Shared Lane Traffic (%)						
Lane Group Flow (vph)	561	0	203	468	241	362
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	11.0		4.0	11.0	5.0	5.0
Minimum Split (s)	25.0		20.0	25.0	21.0	21.0
Total Split (s)	30.0		25.0	30.0	25.0	25.0
Total Split (%)	37.5%		31.3%	37.5%	31.3%	31.3%
Maximum Green (s)	24.5		20.0	24.0	20.0	20.0
Yellow Time (s)	4.5		3.5	4.5	3.5	3.5
All-Red Time (s)	1.0		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Max	Max
Walk Time (s)	7.0			5.0	5.0	5.0
Flash Don't Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	15.3		30.2	29.2	20.2	20.2
Actuated g/C Ratio	0.25		0.50	0.48	0.33	0.33
v/c Ratio	0.62		0.46	0.27	0.41	0.47
Control Delay (s/veh)	20.9		11.9	9.5	19.6	4.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.9		11.9	9.5	19.6	4.7
LOS	C		B	A	B	A
Approach Delay (s/veh)	20.9			10.2	10.7	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 60.4			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 13.6		Intersection LOS: B	
Intersection Capacity Utilization 50.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 52: Miller Ranch Road & Hughes Ranch Road



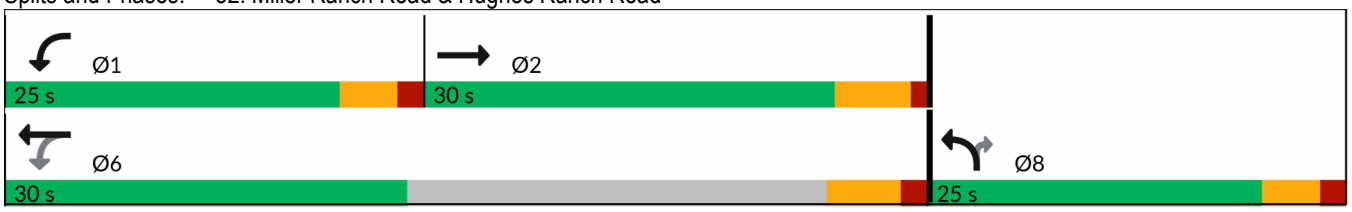


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	474	376	197	357	240	136
Future Volume (vph)	474	376	197	357	240	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	120		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.934					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3306	0	1770	3539	1770	1583
Flt Permitted			0.158		0.950	
Satd. Flow (perm)	3306	0	294	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	258					148
Link Speed (mph)	30			30	30	
Link Distance (ft)	3362			2489	974	
Travel Time (s)	76.4			56.6	22.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	515	409	214	388	261	148
Shared Lane Traffic (%)						
Lane Group Flow (vph)	924	0	214	388	261	148
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	11.0		4.0	11.0	5.0	5.0
Minimum Split (s)	25.0		20.0	25.0	21.0	21.0
Total Split (s)	30.0		25.0	30.0	25.0	25.0
Total Split (%)	37.5%		31.3%	37.5%	31.3%	31.3%
Maximum Green (s)	24.5		20.0	24.0	20.0	20.0
Yellow Time (s)	4.5		3.5	4.5	3.5	3.5
All-Red Time (s)	1.0		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Max	Max
Walk Time (s)	7.0			5.0	5.0	5.0
Flash Don't Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	20.8		36.3	35.3	20.2	20.2
Actuated g/C Ratio	0.31		0.55	0.53	0.30	0.30
v/c Ratio	0.76		0.56	0.21	0.49	0.25
Control Delay (s/veh)	19.5		14.5	8.2	24.4	5.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.5		14.5	8.2	24.4	5.5
LOS	B		B	A	C	A
Approach Delay (s/veh)	19.5			10.4	17.6	
Approach LOS	B			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 66.6			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 16.3		Intersection LOS: B	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 52: Miller Ranch Road & Hughes Ranch Road



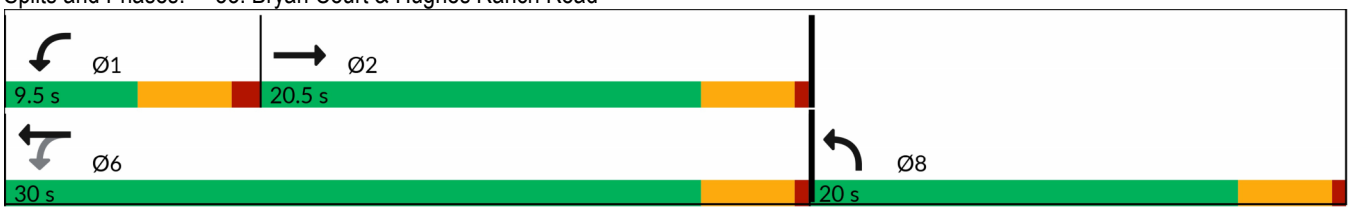


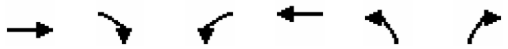
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	536	266	141	444	224	138
Future Volume (vph)	536	266	141	444	224	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	80		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.950				0.948	
Flt Protected			0.950		0.970	
Satd. Flow (prot)	3362	0	1770	3539	1713	0
Flt Permitted			0.180		0.970	
Satd. Flow (perm)	3362	0	335	3539	1713	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	183				65	
Link Speed (mph)	30			30	30	
Link Distance (ft)	2489			1502	641	
Travel Time (s)	56.6			34.1	14.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	583	289	153	483	243	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	872	0	153	483	393	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	4.0		5.0	4.0	4.0	
Minimum Split (s)	20.0		9.5	20.0	20.0	
Total Split (s)	20.5		9.5	30.0	20.0	
Total Split (%)	41.0%		19.0%	60.0%	40.0%	
Maximum Green (s)	16.5		5.0	26.0	16.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.5	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	None	None	
Walk Time (s)	5.0			5.0	5.0	
Flash Don't Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	17.7		24.4	24.9	13.1	
Actuated g/C Ratio	0.38		0.53	0.54	0.28	
v/c Ratio	0.62		0.46	0.25	0.74	
Control Delay (s/veh)	12.7		10.9	6.5	22.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	12.7		10.9	6.5	22.2	
LOS	B		B	A	C	
Approach Delay (s/veh)	12.7			7.6	22.2	
Approach LOS	B			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 46.1			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 13.0		Intersection LOS: B	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 53: Bryan Court & Hughes Ranch Road



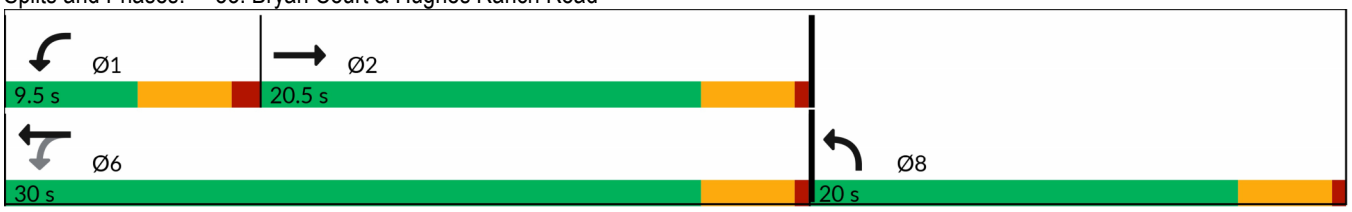


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	635	3	3	557	0	4
Future Volume (vph)	635	3	3	557	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	80		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.999				0.865	
Flt Protected			0.950			
Satd. Flow (prot)	3536	0	1770	3539	1611	0
Flt Permitted			0.341			
Satd. Flow (perm)	3536	0	635	3539	1611	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	1				305	
Link Speed (mph)	30			30	30	
Link Distance (ft)	2489			1502	641	
Travel Time (s)	56.6			34.1	14.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	690	3	3	605	0	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	693	0	3	605	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	4.0		5.0	4.0	4.0	
Minimum Split (s)	20.0		9.5	20.0	20.0	
Total Split (s)	20.5		9.5	30.0	20.0	
Total Split (%)	41.0%		19.0%	60.0%	40.0%	
Maximum Green (s)	16.5		5.0	26.0	16.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.5	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	None	None	
Walk Time (s)	5.0			5.0	5.0	
Flash Don't Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	36.0		33.3	37.4	5.7	
Actuated g/C Ratio	0.92		0.85	0.95	0.15	
v/c Ratio	0.21		0.00	0.18	0.01	
Control Delay (s/veh)	2.0		1.3	0.8	0.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	2.0		1.3	0.8	0.0	
LOS	A		A	A	A	
Approach Delay (s/veh)	2.0			0.8		
Approach LOS	A			A		

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 39.3			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.21			
Intersection Signal Delay (s/veh): 1.4		Intersection LOS: A	
Intersection Capacity Utilization 27.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 53: Bryan Court & Hughes Ranch Road

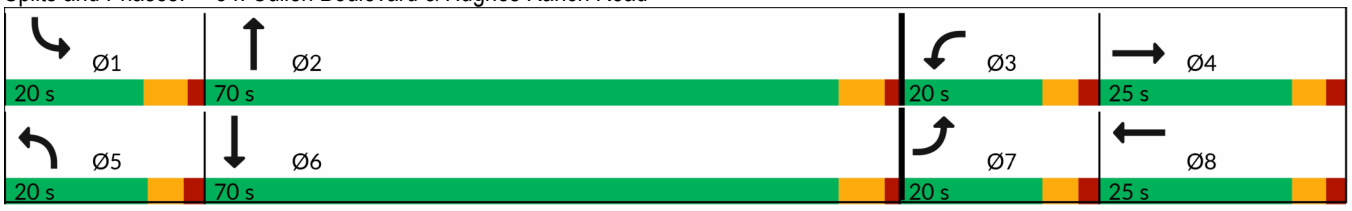


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	75	188	28	135	123	219	1184	19	84	870	101
Future Volume (vph)	179	75	188	28	135	123	219	1184	19	84	870	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		150	80		150	330		150	330		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.98											
Frt		0.893			0.928			0.998			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3161	0	1770	3284	0	1770	3532	0	1770	3483	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1742	3161	0	1770	3284	0	1770	3532	0	1770	3483	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		204			134			2			13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3319			5457			763			632	
Travel Time (s)		75.4			124.0			17.3			14.4	
Confl. Peds. (#/hr)	9											
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	195	82	204	30	147	134	238	1287	21	91	946	110
Shared Lane Traffic (%)												
Lane Group Flow (vph)	195	286	0	30	281	0	238	1308	0	91	1056	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Minimum Split (s)	20.0	25.0		20.0	25.0		20.0	45.0		20.0	45.0	
Total Split (s)	20.0	25.0		20.0	25.0		20.0	70.0		20.0	70.0	
Total Split (%)	14.8%	18.5%		14.8%	18.5%		14.8%	51.9%		14.8%	51.9%	
Maximum Green (s)	14.5	19.5		14.5	19.5		14.5	64.0		14.0	64.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	14.5	22.9		7.6	11.1		14.5	64.1		11.2	61.3	
Actuated g/C Ratio	0.12	0.18		0.06	0.09		0.12	0.52		0.09	0.49	
v/c Ratio	0.94	0.38		0.28	0.68		1.15	0.72		0.57	0.61	
Control Delay (s/veh)	104.2	16.3		63.4	36.9		157.2	26.5		69.1	24.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	104.2	16.3		63.4	36.9		157.2	26.5		69.1	24.6	
LOS	F	B		E	D		F	C		E	C	
Approach Delay (s/veh)		52.0			39.4			46.6			28.1	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 124			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay (s/veh): 40.6		Intersection LOS: D	
Intersection Capacity Utilization 75.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 54: Cullen Boulevard & Hughes Ranch Road

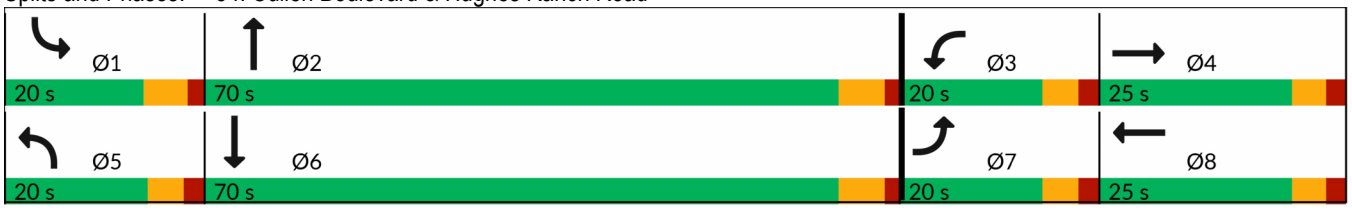


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	132	271	34	133	73	200	1041	53	71	1550	164
Future Volume (vph)	110	132	271	34	133	73	200	1041	53	71	1550	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		150	80		150	330		150	330		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.98											
Frt		0.899			0.947			0.993			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3182	0	1770	3352	0	1770	3514	0	1770	3490	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1740	3182	0	1770	3352	0	1770	3514	0	1770	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		281			63			5			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3319			5457			763			632	
Travel Time (s)		75.4			124.0			17.3			14.4	
Confl. Peds. (#/hr)	9											
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	143	295	37	145	79	217	1132	58	77	1685	178
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	438	0	37	224	0	217	1190	0	77	1863	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Minimum Split (s)	20.0	25.0		20.0	25.0		20.0	45.0		20.0	45.0	
Total Split (s)	20.0	25.0		20.0	25.0		20.0	70.0		20.0	70.0	
Total Split (%)	14.8%	18.5%		14.8%	18.5%		14.8%	51.9%		14.8%	51.9%	
Maximum Green (s)	14.5	19.5		14.5	19.5		14.5	64.0		14.0	64.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	12.5	20.9		8.1	11.5		14.5	70.3		10.5	64.1	
Actuated g/C Ratio	0.10	0.17		0.06	0.09		0.12	0.56		0.08	0.51	
v/c Ratio	0.68	0.57		0.32	0.61		1.06	0.60		0.52	1.04	
Control Delay (s/veh)	74.4	20.8		64.6	46.7		132.1	21.9		67.9	63.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	74.4	20.8		64.6	46.7		132.1	21.9		67.9	63.0	
LOS	E	C		E	D		F	C		E	E	
Approach Delay (s/veh)		32.3			49.2			38.9			63.2	
Approach LOS		C			D			D			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 125.2			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay (s/veh): 50.0		Intersection LOS: D	
Intersection Capacity Utilization 93.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 54: Cullen Boulevard & Hughes Ranch Road



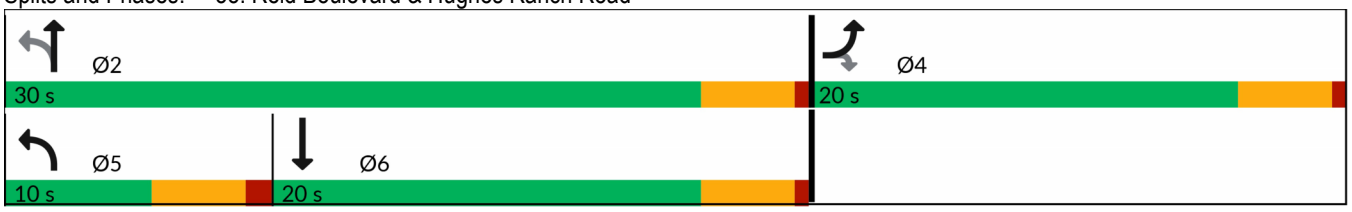


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	151	191	221	141	19
Future Volume (vph)	13	151	191	221	141	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500	150	150			150
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.982	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3476	0
Flt Permitted	0.950		0.527			
Satd. Flow (perm)	1770	1583	982	3539	3476	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		164			21	
Link Speed (mph)	30			30	30	
Link Distance (ft)	5457			901	567	
Travel Time (s)	124.0			20.5	12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	164	208	240	153	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	164	208	240	174	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	5.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	9.5	20.0	20.0	
Total Split (s)	20.0	20.0	10.0	30.0	20.0	
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	
Maximum Green (s)	16.0	16.0	5.5	26.0	16.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	1.0	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	None	
Walk Time (s)	5.0	5.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	6.6	6.6	28.3	29.6	21.4	
Actuated g/C Ratio	0.16	0.16	0.68	0.71	0.51	
v/c Ratio	0.05	0.42	0.27	0.10	0.10	
Control Delay (s/veh)	14.4	7.2	4.4	3.1	7.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	14.4	7.2	4.4	3.1	7.5	
LOS	B	A	A	A	A	
Approach Delay (s/veh)	7.8			3.7	7.5	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 41.7			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay (s/veh): 5.4		Intersection LOS: A	
Intersection Capacity Utilization 28.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 55: Reid Boulevard & Hughes Ranch Road



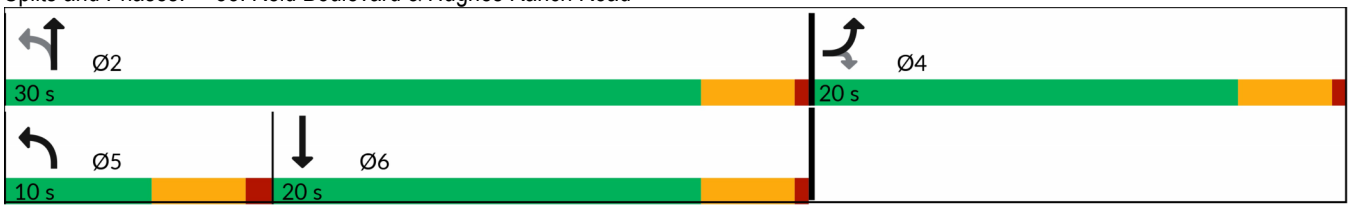


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	228	184	154	213	21
Future Volume (vph)	28	228	184	154	213	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500	150	150			150
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.986	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3490	0
Flt Permitted	0.950		0.484			
Satd. Flow (perm)	1770	1583	902	3539	3490	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		248			22	
Link Speed (mph)	30			30	30	
Link Distance (ft)	5457			901	567	
Travel Time (s)	124.0			20.5	12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	248	200	167	232	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	248	200	167	255	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	5.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	9.5	20.0	20.0	
Total Split (s)	20.0	20.0	10.0	30.0	20.0	
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	
Maximum Green (s)	16.0	16.0	5.5	26.0	16.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	1.0	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	None	
Walk Time (s)	5.0	5.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	7.2	7.2	27.8	28.3	19.9	
Actuated g/C Ratio	0.17	0.17	0.64	0.65	0.46	
v/c Ratio	0.10	0.53	0.29	0.07	0.16	
Control Delay (s/veh)	14.8	7.3	4.9	3.4	8.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	14.8	7.3	4.9	3.4	8.1	
LOS	B	A	A	A	A	
Approach Delay (s/veh)	8.1			4.2	8.1	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 43.5			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay (s/veh): 6.5		Intersection LOS: A	
Intersection Capacity Utilization 30.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 55: Reid Boulevard & Hughes Ranch Road



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1569	97		395	
Travel Time (s)		35.7	2.2		9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	7	0	0	1837	21
Future Volume (vph)	0	7	0	0	1837	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt		0.865				0.850
Flt Protected						
Satd. Flow (prot)	0	1611	0	0	3539	1583
Flt Permitted						
Satd. Flow (perm)	0	1611	0	0	3539	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	216			500	772	
Travel Time (s)	4.9			11.4	17.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	8	0	0	1997	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	8	0	0	1997	23
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

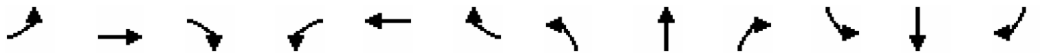
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1569	97		395	
Travel Time (s)		35.7	2.2		9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



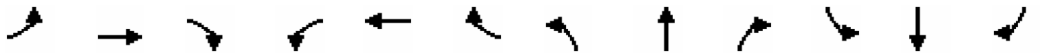
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	33	0	0	3039	43
Future Volume (vph)	0	33	0	0	3039	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt		0.865				0.850
Flt Protected						
Satd. Flow (prot)	0	1611	0	0	3539	1583
Flt Permitted						
Satd. Flow (perm)	0	1611	0	0	3539	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	216			500	772	
Travel Time (s)	4.9			11.4	17.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	36	0	0	3303	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	36	0	0	3303	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		



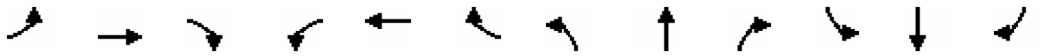
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	148	74	74	148	74	37	74	37	37	74	37
Future Volume (vph)	74	148	74	74	148	74	37	74	37	37	74	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.950			0.950			0.950			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3362	0	1770	3362	0	1770	1770	0	1770	1770	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3362	0	1770	3362	0	1770	1770	0	1770	1770	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3590			2239			733			785	
Travel Time (s)		81.6			50.9			16.7			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	80	161	80	80	161	80	40	80	40	40	80	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	241	0	80	241	0	40	120	0	40	120	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.3%		ICU Level of Service A	
Analysis Period (min) 15			



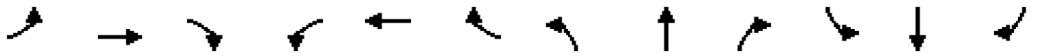
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	3539	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	3539	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2249			1946			317			367	
Travel Time (s)		51.1			44.2			7.2			8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Future Volume (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925			0.925			0.925			0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3274	0	1770	3274	0	1770	1723	0	1770	1723	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3274	0	1770	3274	0	1770	1723	0	1770	1723	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3590			2239			733			785	
Travel Time (s)		81.6			50.9			16.7			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	2	0	1	2	0	1	2	0	1	2	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	3539	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	3539	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2249			1946			317			367	
Travel Time (s)		51.1			44.2			7.2			8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		0	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1502			3319	640	
Travel Time (s)	34.1			75.4	14.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

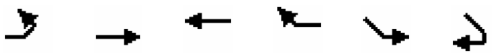
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	0	3278	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	0	3278	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1127	334		1418	
Travel Time (s)		25.6	7.6		32.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



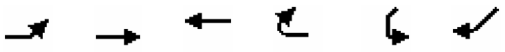
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		0	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1502			3319	640	
Travel Time (s)	34.1			75.4	14.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	0	3278	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	0	3278	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1127	334		1418	
Travel Time (s)		25.6	7.6		32.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

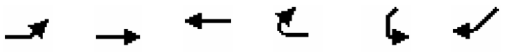


Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	15	0	0	0	9
Future Volume (vph)	0	15	0	0	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	3539	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	0	3539	0	0	0	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	683		720	
Travel Time (s)		5.3	15.5		16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	16	0	0	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	16	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		20	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		0	0		0	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	312			213	239	
Travel Time (s)	7.1			4.8	5.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

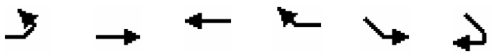


Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	15	0	0	0	9
Future Volume (vph)	0	15	0	0	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	3539	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	0	3539	0	0	0	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	683		720	
Travel Time (s)		5.3	15.5		16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	16	0	0	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	16	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		20	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		0	0		0	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

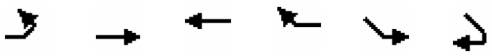
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	312			213	239	
Travel Time (s)	7.1			4.8	5.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	1863	1863	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	1863	1863	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		213	215		156	
Travel Time (s)		4.8	4.9		3.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	1863	1863	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	1863	1863	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		213	215		156	
Travel Time (s)		4.8	4.9		3.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

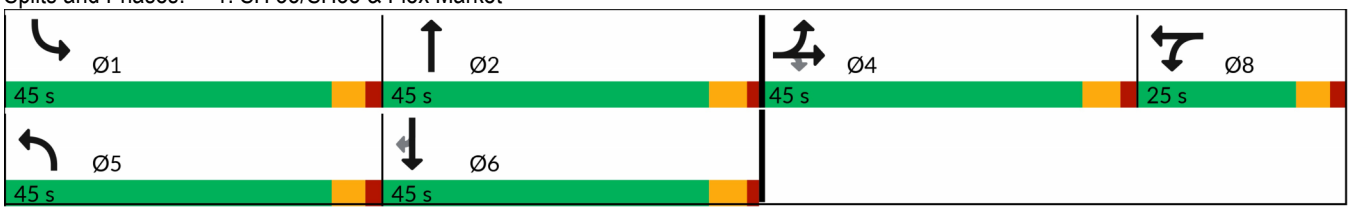
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

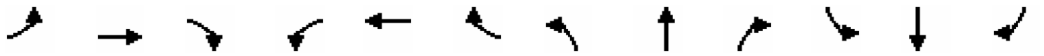
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	4	0	12	0	1080	2	2	1507	1
Future Volume (vph)	1	1	1	4	0	12	0	1080	2	2	1507	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	120		150
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	0			0			50			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt			0.850		0.897							0.850
Flt Protected		0.976			0.988					0.950		
Satd. Flow (prot)	0	1818	1583	0	1651	0	1863	5085	0	1770	5085	1583
Flt Permitted		0.976			0.988					0.950		
Satd. Flow (perm)	0	1818	1583	0	1651	0	1863	5085	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		106							106
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		769			683			1825			845	
Travel Time (s)		17.5			15.5			41.5			19.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1	1	4	0	13	0	1174	2	2	1638	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	1	0	17	0	0	1176	0	2	1638	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	25.0	25.0	25.0	22.0	22.0		25.0	45.0		25.0	45.0	45.0
Total Split (s)	45.0	45.0	45.0	25.0	25.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	28.1%	28.1%	28.1%	15.6%	15.6%		28.1%	28.1%		28.1%	28.1%	28.1%
Maximum Green (s)	38.5	38.5	38.5	19.0	19.0		39.0	39.0		39.0	39.0	39.0
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max		None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0			5.0	5.0
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	0
Act Effct Green (s)		5.8	5.8		5.6			59.8		5.8	61.6	61.6
Actuated g/C Ratio		0.09	0.09		0.08			0.91		0.09	0.93	0.93
v/c Ratio		0.01	0.00		0.07			0.26		0.01	0.35	0.00
Control Delay (s/veh)		33.0	0.0		0.6			3.6		33.0	2.2	0.0
Queue Delay		0.0	0.0		0.0			0.0		0.0	0.0	0.0
Total Delay (s/veh)		33.0	0.0		0.6			3.6		33.0	2.2	0.0
LOS		C	A		A			A		C	A	A
Approach Delay (s/veh)		22.0			0.6			3.6			2.2	
Approach LOS		C			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 66			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.35			
Intersection Signal Delay (s/veh): 2.8		Intersection LOS: A	
Intersection Capacity Utilization 51.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: SH 35/SH35 & Flex Market



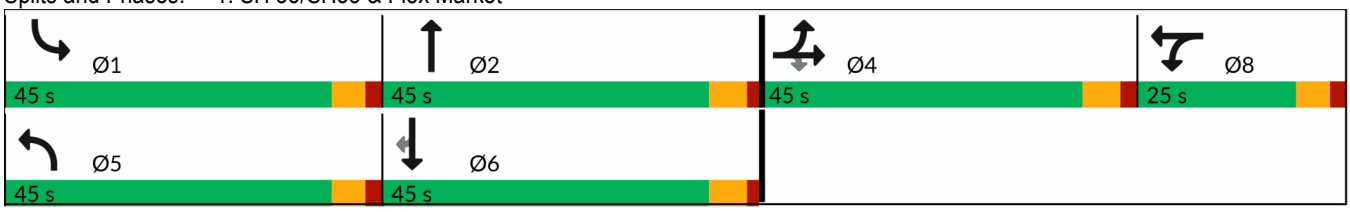


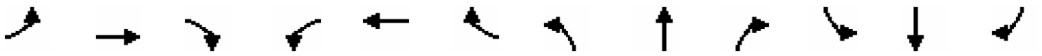
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	0	0	0	2	2	1552	4	8	1045	2
Future Volume (vph)	1	2	0	0	0	2	2	1552	4	8	1045	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	120		150
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	0			0			50			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt					0.865							0.850
Flt Protected		0.984					0.950			0.950		
Satd. Flow (prot)	0	1833	1863	0	1611	0	1770	5085	0	1770	5085	1583
Flt Permitted		0.984					0.950			0.950		
Satd. Flow (perm)	0	1833	1863	0	1611	0	1770	5085	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					724							106
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		769			683			1825			845	
Travel Time (s)		17.5			15.5			41.5			19.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	2	0	0	0	2	2	1687	4	9	1136	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	2	0	2	1691	0	9	1136	2
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Perm		NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	25.0	25.0	25.0	22.0	22.0		25.0	45.0		25.0	45.0	45.0
Total Split (s)	45.0	45.0	45.0	25.0	25.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	28.1%	28.1%	28.1%	15.6%	15.6%		28.1%	28.1%		28.1%	28.1%	28.1%
Maximum Green (s)	38.5	38.5	38.5	19.0	19.0		39.0	39.0		39.0	39.0	39.0
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max		None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0			5.0	5.0
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	0
Act Effct Green (s)		5.8			5.7		5.8	60.2		6.0	60.3	60.3
Actuated g/C Ratio		0.09			0.09		0.09	0.91		0.09	0.91	0.91
v/c Ratio		0.02			0.00		0.01	0.37		0.06	0.25	0.00
Control Delay (s/veh)		34.0			0.0		34.0	4.2		33.4	3.5	0.0
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)		34.0			0.0		34.0	4.2		33.4	3.5	0.0
LOS		C			A		C	A		C	A	A
Approach Delay (s/veh)		34.0						4.3			3.7	
Approach LOS		C						A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 66.4			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay (s/veh): 4.1		Intersection LOS: A	
Intersection Capacity Utilization 43.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: SH 35/SH35 & Flex Market



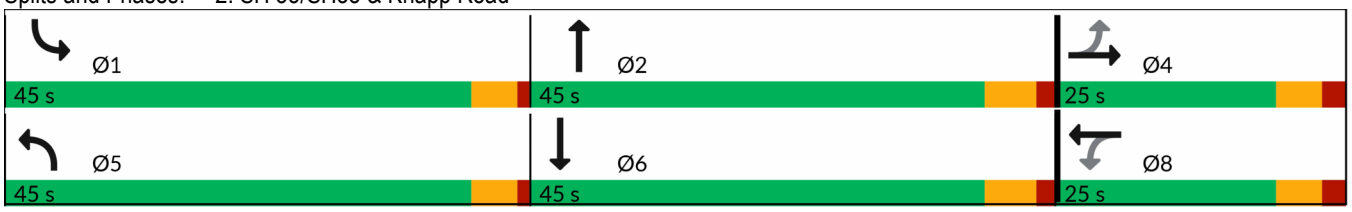


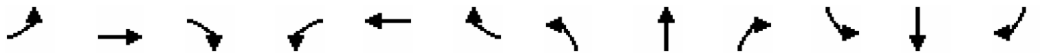
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	1	17	0	58	2	981	20	102	1437	6
Future Volume (vph)	15	0	1	17	0	58	2	981	20	102	1437	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	150		150	500		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.992			0.895			0.997			0.999	
Flt Protected		0.955			0.989		0.950			0.950		
Satd. Flow (prot)	0	1765	0	0	1649	0	1770	5070	0	1770	5080	0
Flt Permitted		0.899			0.918		0.950			0.950		
Satd. Flow (perm)	0	1661	0	0	1530	0	1770	5070	0	1770	5080	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			76			3			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			854			3272			1825	
Travel Time (s)		9.6			19.4			74.4			41.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	0	1	18	0	63	2	1066	22	111	1562	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	81	0	2	1088	0	111	1569	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		25.0	45.0		25.0	45.0	
Total Split (s)	25.0	25.0		25.0	25.0		45.0	45.0		45.0	45.0	
Total Split (%)	21.7%	21.7%		21.7%	21.7%		39.1%	39.1%		39.1%	39.1%	
Maximum Green (s)	19.0	19.0		19.0	19.0		40.0	39.0		40.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		5.0	6.0		5.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		6.5			6.5		5.7	44.3		9.9	54.4	
Actuated g/C Ratio		0.09			0.09		0.08	0.62		0.14	0.77	
v/c Ratio		0.08			0.39		0.01	0.34		0.45	0.40	
Control Delay (s/veh)		0.7			15.4		33.0	9.6		35.2	4.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		0.7			15.4		33.0	9.6		35.2	4.9	
LOS		A			B		C	A		D	A	
Approach Delay (s/veh)		0.7			15.4			9.7			6.9	
Approach LOS		A			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 70.9			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay (s/veh): 8.1		Intersection LOS: A	
Intersection Capacity Utilization 50.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: SH 35/SH35 & Knapp Road



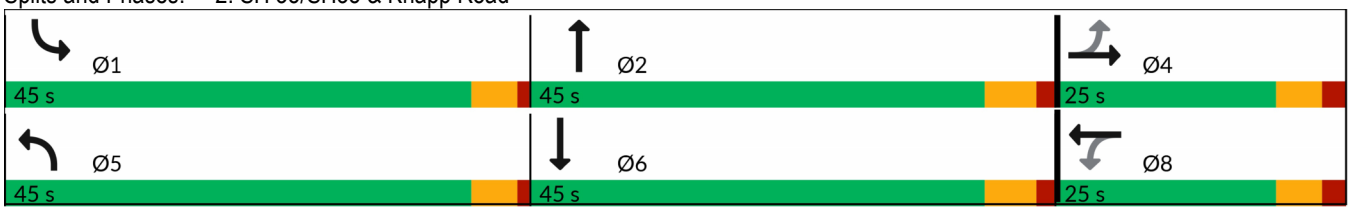


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	2	15	0	126	10	1417	14	29	994	21
Future Volume (vph)	7	0	2	15	0	126	10	1417	14	29	994	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	150		150	500		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.973			0.879			0.999			0.997	
Flt Protected		0.962			0.995		0.950			0.950		
Satd. Flow (prot)	0	1744	0	0	1629	0	1770	5080	0	1770	5070	0
Flt Permitted		0.608			0.961		0.950			0.950		
Satd. Flow (perm)	0	1102	0	0	1573	0	1770	5080	0	1770	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			137			1			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			854			3272			1825	
Travel Time (s)		9.6			19.4			74.4			41.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	0	2	16	0	137	11	1540	15	32	1080	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	153	0	11	1555	0	32	1103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		25.0	45.0		25.0	45.0	
Total Split (s)	25.0	25.0		25.0	25.0		45.0	45.0		45.0	45.0	
Total Split (%)	21.7%	21.7%		21.7%	21.7%		39.1%	39.1%		39.1%	39.1%	
Maximum Green (s)	19.0	19.0		19.0	19.0		40.0	39.0		40.0	39.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		5.0	6.0		5.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		7.1			7.1		6.0	42.4		6.8	45.0	
Actuated g/C Ratio		0.11			0.11		0.09	0.64		0.10	0.68	
v/c Ratio		0.05			0.53		0.07	0.48		0.18	0.32	
Control Delay (s/veh)		0.6			14.7		30.7	8.3		30.8	5.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		0.6			14.7		30.7	8.3		30.8	5.5	
LOS		A			B		C	A		C	A	
Approach Delay (s/veh)		0.6			14.7			8.4			6.2	
Approach LOS		A			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 66.3			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay (s/veh): 7.9		Intersection LOS: A	
Intersection Capacity Utilization 46.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: SH 35/SH35 & Knapp Road

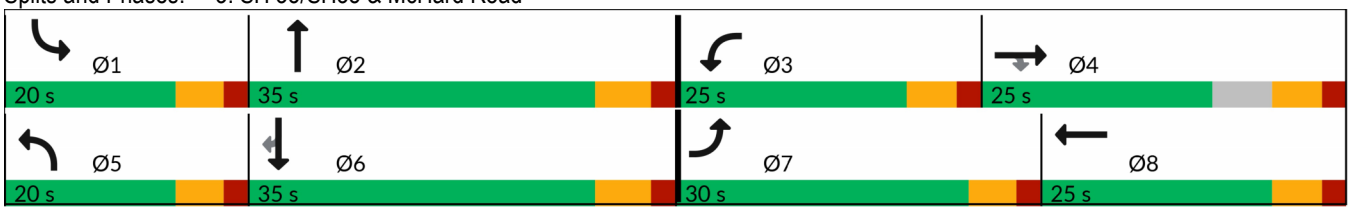


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	417	201	150	420	42	169	753	117	156	1054	342
Future Volume (vph)	194	417	201	150	420	42	169	753	117	156	1054	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		250	200		150	150		150	500		250
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.91	1.00
Frt			0.850		0.986			0.980				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3490	0	1770	4984	0	1770	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3490	0	1770	4984	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			218		8			26				372
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1441			2786			3440			3272	
Travel Time (s)		32.8			63.3			78.2			74.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	211	453	218	163	457	46	184	818	127	170	1146	372
Shared Lane Traffic (%)												
Lane Group Flow (vph)	211	453	218	163	503	0	184	945	0	170	1146	372
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2		1	2		1	2	0
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100		20	100		20	100	0
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	0	20	6		20	6		20	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	20.0	24.0	24.0	15.0	24.0		15.0	30.0		15.0	30.0	30.0
Total Split (s)	30.0	25.0	25.0	25.0	25.0		20.0	35.0		20.0	35.0	35.0
Total Split (%)	27.3%	22.7%	22.7%	22.7%	22.7%		18.2%	31.8%		18.2%	31.8%	31.8%
Maximum Green (s)	24.0	19.0	19.0	19.0	19.0		14.0	28.5		14.0	28.5	28.5
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.5		6.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max		None	Max	Max
Walk Time (s)		7.0	7.0		7.0			7.0			5.0	5.0
Flash Don't Walk (s)		11.0	11.0		11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	17.2	20.7	20.7	14.2	17.8		13.4	29.1		13.0	28.7	28.7
Actuated g/C Ratio	0.17	0.20	0.20	0.14	0.18		0.13	0.29		0.13	0.28	0.28
v/c Ratio	0.71	0.63	0.44	0.66	0.82		0.79	0.65		0.75	0.80	0.52
Control Delay (s/veh)	53.4	41.7	7.9	55.1	52.2		68.4	34.6		65.4	39.8	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	53.4	41.7	7.9	55.1	52.2		68.4	34.6		65.4	39.8	6.3
LOS	D	D	A	E	D		E	C		E	D	A
Approach Delay (s/veh)		36.2			52.9			40.1			35.0	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 101.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 39.3		Intersection LOS: D	
Intersection Capacity Utilization 73.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: SH 35/SH35 & McHard Road

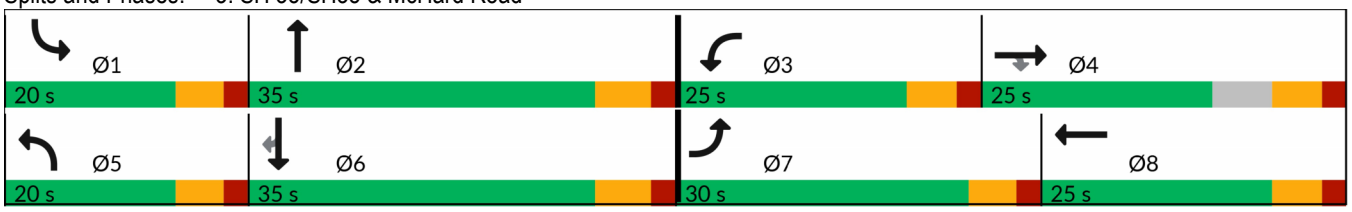


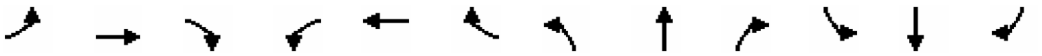
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	288	294	291	149	386	79	183	1077	86	43	778	207
Future Volume (vph)	288	294	291	149	386	79	183	1077	86	43	778	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		250	200		150	150		150	500		250
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.91	1.00
Frt			0.850		0.975			0.989				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3451	0	1770	5029	0	1770	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3451	0	1770	5029	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			316		19			11				225
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1441			2786			3440			3272	
Travel Time (s)		32.8			63.3			78.2			74.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	313	320	316	162	420	86	199	1171	93	47	846	225
Shared Lane Traffic (%)												
Lane Group Flow (vph)	313	320	316	162	506	0	199	1264	0	47	846	225
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2		1	2		1	2	0
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100		20	100		20	100	0
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	0	20	6		20	6		20	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0	8.0	3.0	8.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	20.0	24.0	24.0	15.0	24.0		15.0	30.0		15.0	30.0	30.0
Total Split (s)	30.0	25.0	25.0	25.0	25.0		20.0	35.0		20.0	35.0	35.0
Total Split (%)	27.3%	22.7%	22.7%	22.7%	22.7%		18.2%	31.8%		18.2%	31.8%	31.8%
Maximum Green (s)	24.0	19.0	19.0	19.0	19.0		14.0	28.5		14.0	28.5	28.5
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.5		6.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Max		None	Max	Max
Walk Time (s)		7.0	7.0		7.0			7.0			5.0	5.0
Flash Don't Walk (s)		11.0	11.0		11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
Act Effct Green (s)	21.9	25.3	25.3	14.7	18.1		13.7	36.6		8.3	28.6	28.6
Actuated g/C Ratio	0.21	0.24	0.24	0.14	0.17		0.13	0.34		0.08	0.27	0.27
v/c Ratio	0.86	0.38	0.51	0.67	0.84		0.88	0.73		0.34	0.62	0.38
Control Delay (s/veh)	64.9	36.4	7.3	57.7	55.8		81.9	35.5		54.2	37.3	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	64.9	36.4	7.3	57.7	55.8		81.9	35.5		54.2	37.3	6.4
LOS	E	D	A	E	E		F	D		D	D	A
Approach Delay (s/veh)		36.1			56.3			41.8			31.8	
Approach LOS		D			E			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 106.8			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 40.2		Intersection LOS: D	
Intersection Capacity Utilization 76.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: SH 35/SH35 & McHard Road



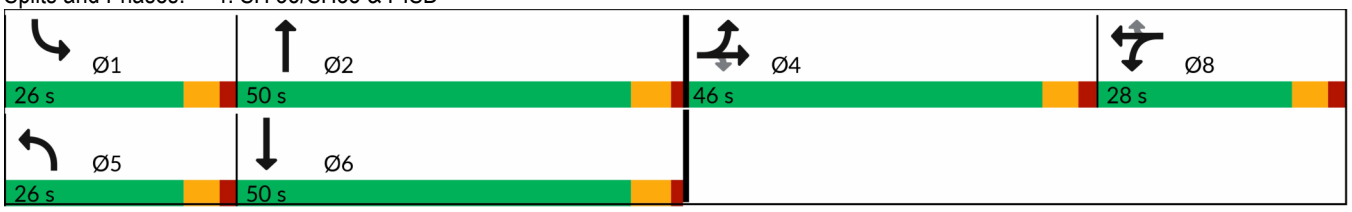


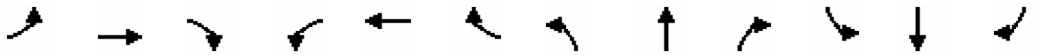
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	2	39	189	0	38	14	800	177	104	1279	1
Future Volume (vph)	22	2	39	189	0	38	14	800	177	104	1279	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt			0.850			0.850		0.973				
Flt Protected		0.956			0.950		0.950			0.950		
Satd. Flow (prot)	0	1781	1583	0	1770	1583	1770	4948	0	1770	5085	0
Flt Permitted		0.956			0.950		0.950			0.950		
Satd. Flow (perm)	0	1781	1583	0	1770	1583	1770	4948	0	1770	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109			109		33				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		568			482			1254			3440	
Travel Time (s)		12.9			11.0			28.5			78.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	2	42	205	0	41	15	870	192	113	1390	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	42	0	205	41	15	1062	0	113	1391	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	0	20	6	0	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0	45.0	25.0	25.0	25.0	25.0	45.0		25.0	24.0	
Total Split (s)	46.0	46.0	46.0	28.0	28.0	28.0	26.0	50.0		26.0	50.0	
Total Split (%)	30.7%	30.7%	30.7%	18.7%	18.7%	18.7%	17.3%	33.3%		17.3%	33.3%	
Maximum Green (s)	40.0	40.0	40.0	22.0	22.0	22.0	20.0	44.0		20.0	44.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		10.2	10.2		17.8	17.8	6.6	44.8		12.2	58.2	
Actuated g/C Ratio		0.10	0.10		0.17	0.17	0.06	0.43		0.12	0.55	
v/c Ratio		0.15	0.17		0.69	0.11	0.14	0.50		0.55	0.49	
Control Delay (s/veh)		50.4	1.4		55.1	0.7	53.5	24.2		56.5	17.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		50.4	1.4		55.1	0.7	53.5	24.2		56.5	17.9	
LOS		D	A		E	A	D	C		E	B	
Approach Delay (s/veh)		20.2			46.0			24.6			20.8	
Approach LOS		C			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 105.2			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 24.4		Intersection LOS: C	
Intersection Capacity Utilization 60.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: SH 35/SH35 & PISD



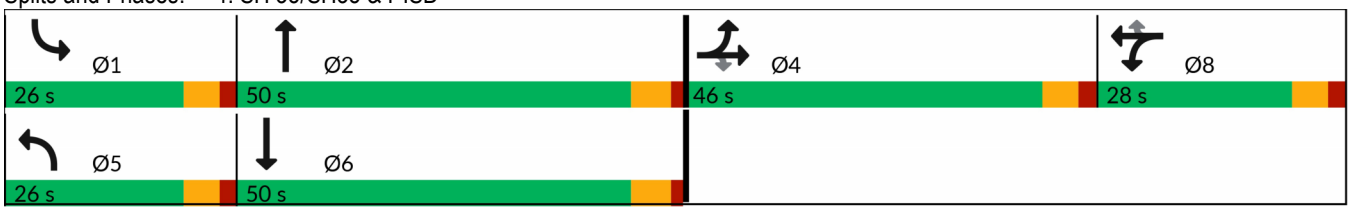


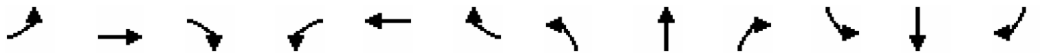
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	11	53	3	19	68	1271	102	41	900	16
Future Volume (vph)	0	0	11	53	3	19	68	1271	102	41	900	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	120		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt			0.850			0.850		0.989			0.997	
Flt Protected					0.955		0.950			0.950		
Satd. Flow (prot)	0	1863	1583	0	1779	1583	1770	5029	0	1770	5070	0
Flt Permitted					0.955		0.950			0.950		
Satd. Flow (perm)	0	1863	1583	0	1779	1583	1770	5029	0	1770	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			427			109		9			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		568			482			1254			3440	
Travel Time (s)		12.9			11.0			28.5			78.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	12	58	3	21	74	1382	111	45	978	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	12	0	61	21	74	1493	0	45	995	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	0	20	6	0	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type			Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0	45.0	25.0	25.0	25.0	25.0	45.0		25.0	24.0	
Total Split (s)	46.0	46.0	46.0	28.0	28.0	28.0	26.0	50.0		26.0	50.0	
Total Split (%)	30.7%	30.7%	30.7%	18.7%	18.7%	18.7%	17.3%	33.3%		17.3%	33.3%	
Maximum Green (s)	40.0	40.0	40.0	22.0	22.0	22.0	20.0	44.0		20.0	44.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)			10.2		8.3	8.3	8.9	53.9		7.7	50.1	
Actuated g/C Ratio			0.13		0.10	0.10	0.11	0.67		0.10	0.62	
v/c Ratio			0.02		0.33	0.08	0.38	0.44		0.27	0.32	
Control Delay (s/veh)			0.1		41.8	0.6	42.0	11.3		41.6	11.7	
Queue Delay			0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)			0.1		41.8	0.6	42.0	11.3		41.6	11.7	
LOS			A		D	A	D	B		D	B	
Approach Delay (s/veh)		0.1			31.3			12.8			13.0	
Approach LOS		A			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 80.8			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay (s/veh): 13.4		Intersection LOS: B	
Intersection Capacity Utilization 49.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: SH 35/SH35 & PISD



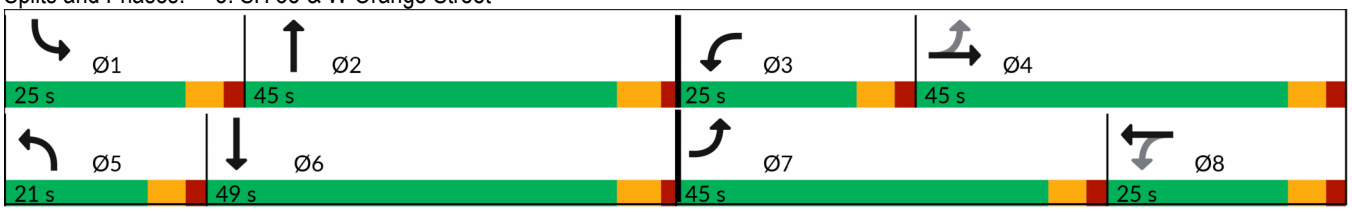


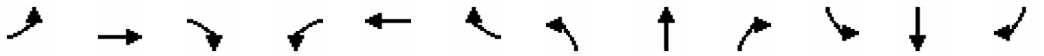
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	76	97	74	105	74	78	712	74	90	1360	101
Future Volume (vph)	115	76	97	74	105	74	78	712	74	90	1360	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	200		100	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.916			0.938			0.986			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1706	0	1770	1747	0	1770	5014	0	1770	5034	0
Flt Permitted	0.357			0.639			0.950			0.950		
Satd. Flow (perm)	665	1706	0	1190	1747	0	1770	5014	0	1770	5034	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			21			12			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2722			832			2002			1254	
Travel Time (s)		61.9			18.9			45.5			28.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	125	83	105	80	114	80	85	774	80	98	1478	110
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	188	0	80	194	0	85	854	0	98	1588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	5.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0		25.0	25.0		20.0	45.0		25.0	45.0	
Total Split (s)	45.0	45.0		25.0	25.0		21.0	45.0		25.0	49.0	
Total Split (%)	32.1%	32.1%		17.9%	17.9%		15.0%	32.1%		17.9%	35.0%	
Maximum Green (s)	39.0	39.0		19.0	19.0		15.0	39.0		19.0	43.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	31.0	21.4		24.4	15.5		10.4	41.8		11.1	45.4	
Actuated g/C Ratio	0.30	0.20		0.23	0.15		0.10	0.40		0.11	0.43	
v/c Ratio	0.39	0.49		0.25	0.70		0.48	0.42		0.52	0.72	
Control Delay (s/veh)	30.1	34.7		28.1	52.6		55.5	24.1		55.8	28.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	30.1	34.7		28.1	52.6		55.5	24.1		55.8	28.8	
LOS	C	C		C	D		E	C		E	C	
Approach Delay (s/veh)		32.8			45.4			27.0			30.3	
Approach LOS		C			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 104.5			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay (s/veh): 30.9		Intersection LOS: C	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: SH 35 & W Orange Street



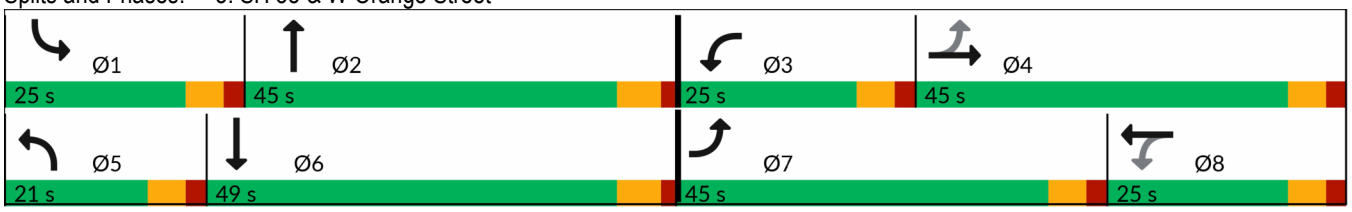


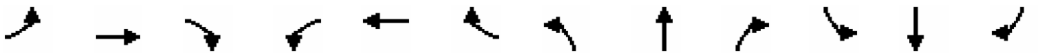
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	132	60	79	83	159	54	1134	43	101	864	37
Future Volume (vph)	115	132	60	79	83	159	54	1134	43	101	864	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	200		100	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.953			0.901			0.994			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1775	0	1770	1678	0	1770	5055	0	1770	5055	0
Flt Permitted	0.269			0.597			0.950			0.950		
Satd. Flow (perm)	501	1775	0	1112	1678	0	1770	5055	0	1770	5055	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			57			4			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2722			832			2002			1254	
Travel Time (s)		61.9			18.9			45.5			28.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	125	143	65	86	90	173	59	1233	47	110	939	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	208	0	86	263	0	59	1280	0	110	979	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	5.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0		25.0	25.0		20.0	45.0		25.0	45.0	
Total Split (s)	45.0	45.0		25.0	25.0		21.0	45.0		25.0	49.0	
Total Split (%)	32.1%	32.1%		17.9%	17.9%		15.0%	32.1%		17.9%	35.0%	
Maximum Green (s)	39.0	39.0		19.0	19.0		15.0	39.0		19.0	43.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	33.8	24.2		27.8	18.8		9.0	39.8		11.9	45.3	
Actuated g/C Ratio	0.32	0.23		0.26	0.18		0.08	0.37		0.11	0.43	
v/c Ratio	0.42	0.50		0.25	0.76		0.40	0.68		0.56	0.45	
Control Delay (s/veh)	29.6	40.1		26.8	48.8		55.3	30.8		56.4	23.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	29.6	40.1		26.8	48.8		55.3	30.8		56.4	23.8	
LOS	C	D		C	D		E	C		E	C	
Approach Delay (s/veh)		36.2			43.4			31.9			27.1	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 106.3			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 32.0		Intersection LOS: C	
Intersection Capacity Utilization 70.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: SH 35 & W Orange Street



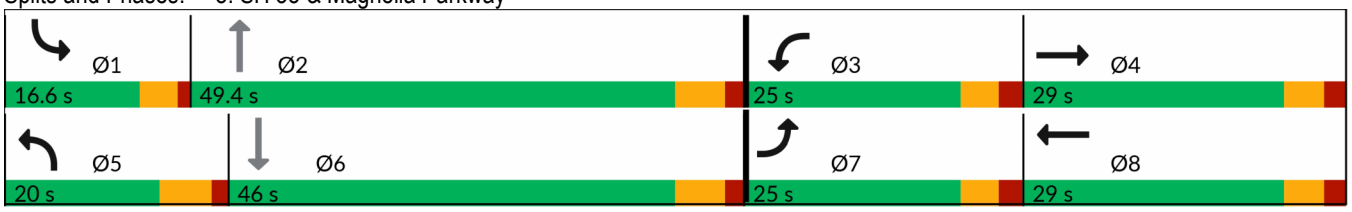


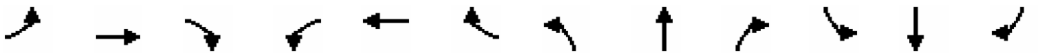
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	397	147	124	578	49	173	578	67	115	626	217
Future Volume (vph)	178	397	147	124	578	49	173	578	67	115	626	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		0	380		0	180		0	180		160
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.959			0.988			0.984			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3394	0	1770	3497	0	1770	3483	0	1770	3401	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3394	0	1770	3497	0	1770	3483	0	1770	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			6			12			43	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4203			1078			2138			5584	
Travel Time (s)		95.5			24.5			48.6			126.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	193	432	160	135	628	53	188	628	73	125	680	236
Shared Lane Traffic (%)												
Lane Group Flow (vph)	193	592	0	135	681	0	188	701	0	125	916	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5			1		
Permitted Phases								2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		20.0	45.0		9.5	45.0	
Total Split (s)	25.0	29.0		25.0	29.0		20.0	49.4		16.6	46.0	
Total Split (%)	20.8%	24.2%		20.8%	24.2%		16.7%	41.2%		13.8%	38.3%	
Maximum Green (s)	19.5	23.5		19.5	23.5		14.0	43.4		12.1	40.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		4.5	4.5		3.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.0	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	16.7	25.8		14.4	23.5		14.0	44.2		11.3	40.0	
Actuated g/C Ratio	0.14	0.22		0.12	0.20		0.12	0.38		0.10	0.34	
v/c Ratio	0.77	0.76		0.62	0.96		0.89	0.53		0.73	0.77	
Control Delay (s/veh)	68.6	47.7		61.5	73.0		91.3	30.3		76.5	38.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	68.6	47.7		61.5	73.0		91.3	30.3		76.5	38.4	
LOS	E	D		E	E		F	C		E	D	
Approach Delay (s/veh)		52.9			71.1			43.2			43.0	
Approach LOS		D			E			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 117.2			
Natural Cycle: 115			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay (s/veh): 51.7		Intersection LOS: D	
Intersection Capacity Utilization 80.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 8: SH 35 & Magnoila Parkway



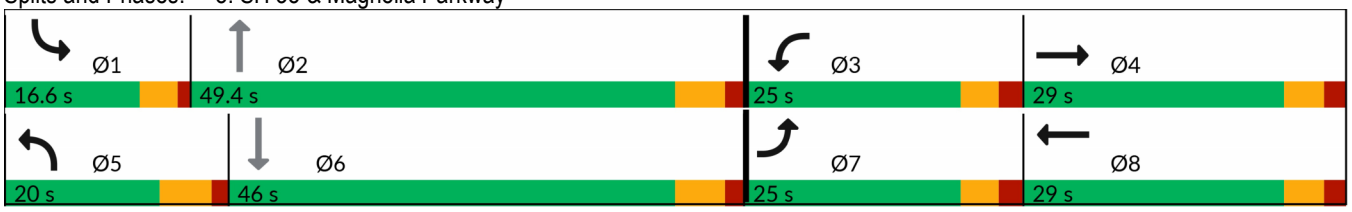


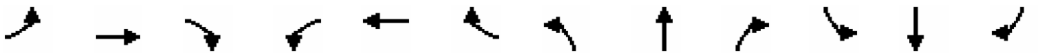
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	449	134	105	326	94	147	754	87	61	425	134
Future Volume (vph)	275	449	134	105	326	94	147	754	87	61	425	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		0	380		0	180		0	180		160
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.965			0.966			0.984			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3415	0	1770	3419	0	1770	3483	0	1770	3412	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3415	0	1770	3419	0	1770	3483	0	1770	3412	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			28			12			38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4203			1078			2138			5584	
Travel Time (s)		95.5			24.5			48.6			126.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	299	488	146	114	354	102	160	820	95	66	462	146
Shared Lane Traffic (%)												
Lane Group Flow (vph)	299	634	0	114	456	0	160	915	0	66	608	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5			1		
Permitted Phases								2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		20.0	45.0		9.5	45.0	
Total Split (s)	25.0	29.0		25.0	29.0		20.0	49.4		16.6	46.0	
Total Split (%)	20.8%	24.2%		20.8%	24.2%		16.7%	41.2%		13.8%	38.3%	
Maximum Green (s)	19.5	23.5		19.5	23.5		14.0	43.4		12.1	40.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		4.5	4.5		3.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.0	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	19.5	25.8		13.2	19.5		13.3	47.7		9.4	40.1	
Actuated g/C Ratio	0.17	0.22		0.11	0.17		0.12	0.41		0.08	0.35	
v/c Ratio	1.00	0.81		0.56	0.76		0.79	0.63		0.46	0.50	
Control Delay (s/veh)	101.1	50.0		59.7	51.7		76.9	30.6		61.7	30.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	101.1	50.0		59.7	51.7		76.9	30.6		61.7	30.1	
LOS	F	D		E	D		E	C		E	C	
Approach Delay (s/veh)		66.4			53.3			37.5			33.2	
Approach LOS		E			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 115.4			
Natural Cycle: 115			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay (s/veh): 47.7		Intersection LOS: D	
Intersection Capacity Utilization 72.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 8: SH 35 & Magnoila Parkway



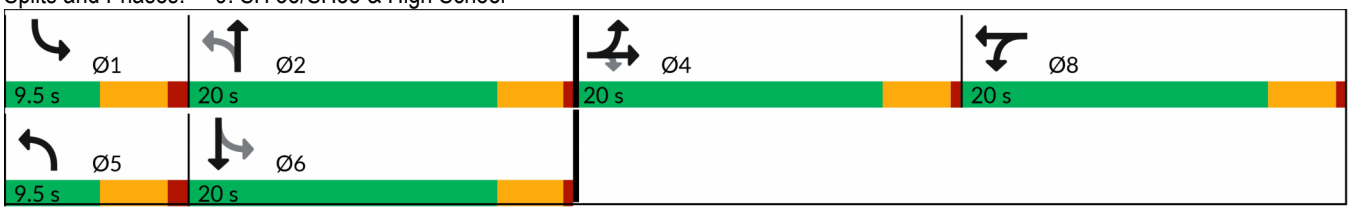


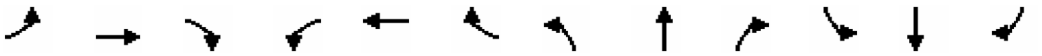
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	14	2	21	0	48	0	831	30	98	889	1
Future Volume (vph)	25	14	2	21	0	48	0	831	30	98	889	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.906			0.995				
Flt Protected		0.969			0.985					0.950		
Satd. Flow (prot)	0	1805	1583	0	1662	0	1863	3522	0	1770	3539	0
Flt Permitted		0.969			0.985					0.198		
Satd. Flow (perm)	0	1805	1583	0	1662	0	1863	3522	0	369	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149		149			5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		688			655			2138			2138	
Travel Time (s)		15.6			14.9			48.6			48.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	15	2	23	0	52	0	903	33	107	966	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	2	0	75	0	0	936	0	107	967	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	0	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (%)	28.8%	28.8%	28.8%	28.8%	28.8%		13.7%	28.8%		13.7%	28.8%	
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0		5.0	16.0		5.0	16.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)		6.7	6.7		5.7			25.4		28.0	30.5	
Actuated g/C Ratio		0.16	0.16		0.14			0.61		0.67	0.73	
v/c Ratio		0.15	0.01		0.21			0.44		0.25	0.37	
Control Delay (s/veh)		19.0	0.0		2.3			12.7		7.1	5.9	
Queue Delay		0.0	0.0		0.0			0.0		0.0	0.0	
Total Delay (s/veh)		19.0	0.0		2.3			12.7		7.1	5.9	
LOS		B	A		A			B		A	A	
Approach Delay (s/veh)		18.2			2.3			12.7			6.0	
Approach LOS		B			A			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 69.5			
Actuated Cycle Length: 41.7			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay (s/veh): 9.1		Intersection LOS: A	
Intersection Capacity Utilization 50.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: SH 35/SH35 & High School



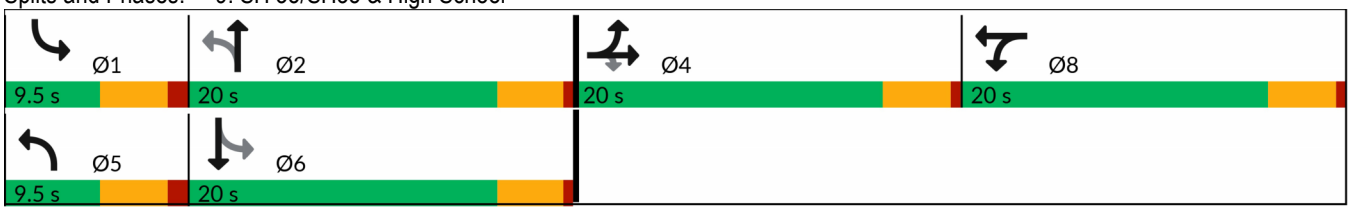


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	3	0	13	11	74	0	944	36	161	475	27
Future Volume (vph)	1	3	0	13	11	74	0	944	36	161	475	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt					0.898			0.995			0.992	
Flt Protected		0.988			0.993					0.950		
Satd. Flow (prot)	0	1840	1863	0	1661	0	1863	3522	0	1770	3511	0
Flt Permitted		0.988			0.993					0.166		
Satd. Flow (perm)	0	1840	1863	0	1661	0	1863	3522	0	309	3511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					80			5			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		688			655			2138			2138	
Travel Time (s)		15.6			14.9			48.6			48.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	3	0	14	12	80	0	1026	39	175	516	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	106	0	0	1065	0	175	545	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	0	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (%)	28.8%	28.8%	28.8%	28.8%	28.8%		13.7%	28.8%		13.7%	28.8%	
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0		5.0	16.0		5.0	16.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)		5.8			6.7			19.5		28.8	31.2	
Actuated g/C Ratio		0.14			0.16			0.47		0.69	0.75	
v/c Ratio		0.02			0.32			0.64		0.44	0.21	
Control Delay (s/veh)		18.5			10.2			15.2		10.3	4.2	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay (s/veh)		18.5			10.2			15.2		10.3	4.2	
LOS		B			B			B		B	A	
Approach Delay (s/veh)		18.5			10.2			15.2			5.7	
Approach LOS		B			B			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 69.5			
Actuated Cycle Length: 41.5			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay (s/veh): 11.3		Intersection LOS: B	
Intersection Capacity Utilization 59.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: SH 35/SH35 & High School

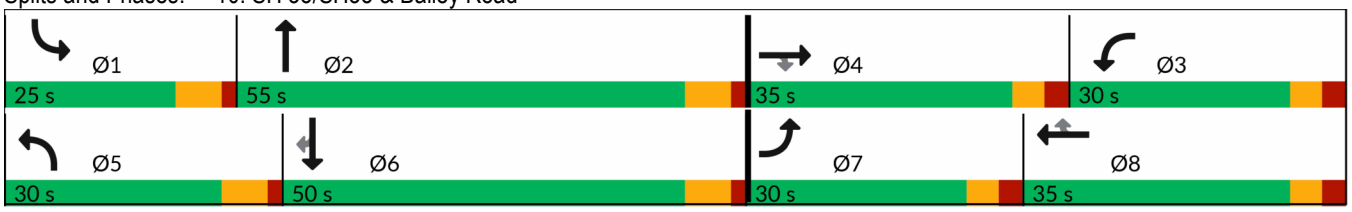


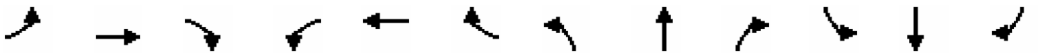
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	259	191	56	560	156	295	456	41	78	666	175
Future Volume (vph)	113	259	191	56	560	156	295	456	41	78	666	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.988				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3497	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3497	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			208			120		7				124
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		782			1587			6422			2138	
Travel Time (s)		17.8			36.1			146.0			48.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	123	282	208	61	609	170	321	496	45	85	724	190
Shared Lane Traffic (%)												
Lane Group Flow (vph)	123	282	208	61	609	170	321	541	0	85	724	190
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		42			42			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2	0	1	2		1	2	0
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100	0	20	100		20	100	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	0	20	6	0	20	6		20	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	12.0		5.0	12.0	12.0
Minimum Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	20.0	50.0		25.0	50.0	50.0
Total Split (s)	30.0	35.0	35.0	30.0	35.0	35.0	30.0	55.0		25.0	50.0	50.0
Total Split (%)	20.7%	24.1%	24.1%	20.7%	24.1%	24.1%	20.7%	37.9%		17.2%	34.5%	34.5%
Maximum Green (s)	24.0	29.0	29.0	24.0	29.0	29.0	23.5	48.5		18.5	43.5	43.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.5	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max		None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	0
Act Effct Green (s)	14.2	21.8	21.8	21.9	26.7	26.7	23.7	49.2		11.5	37.0	37.0
Actuated g/C Ratio	0.11	0.17	0.17	0.17	0.21	0.21	0.19	0.39		0.09	0.29	0.29
v/c Ratio	0.62	0.46	0.47	0.20	0.82	0.40	0.97	0.40		0.53	0.70	0.35
Control Delay (s/veh)	68.8	53.4	10.3	46.4	58.3	18.0	95.4	30.2		68.9	44.8	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	68.8	53.4	10.3	46.4	58.3	18.0	95.4	30.2		68.9	44.8	15.3
LOS	E	D	B	D	E	B	F	C		E	D	B
Approach Delay (s/veh)		41.9			49.3			54.5			41.2	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 126.8			
Natural Cycle: 135			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 46.9		Intersection LOS: D	
Intersection Capacity Utilization 77.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 10: SH 35/SH35 & Bailey Road



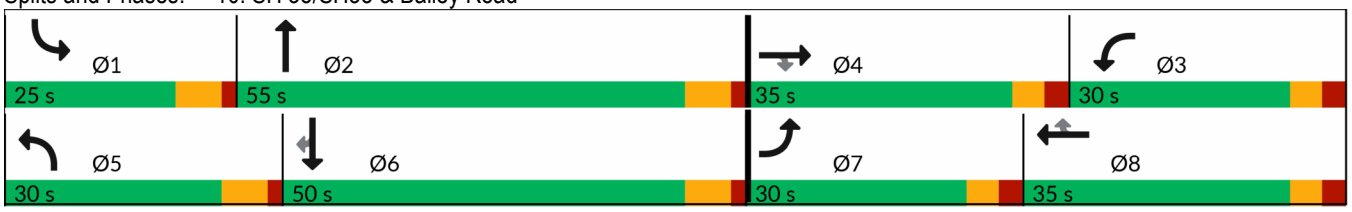


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	339	283	26	188	69	189	513	17	101	349	107
Future Volume (vph)	152	339	283	26	188	69	189	513	17	101	349	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3522	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3522	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			308			120		2				117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		782			1587			6422			2138	
Travel Time (s)		17.8			36.1			146.0			48.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	165	368	308	28	204	75	205	558	18	110	379	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	165	368	308	28	204	75	205	576	0	110	379	116
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		42			42			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2	0	1	2		1	2	0
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100	0	20	100		20	100	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	0	20	6	0	20	6		20	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	12.0		5.0	12.0	12.0
Minimum Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	20.0	50.0		25.0	50.0	50.0
Total Split (s)	30.0	35.0	35.0	30.0	35.0	35.0	30.0	55.0		25.0	50.0	50.0
Total Split (%)	20.7%	24.1%	24.1%	20.7%	24.1%	24.1%	20.7%	37.9%		17.2%	34.5%	34.5%
Maximum Green (s)	24.0	29.0	29.0	24.0	29.0	29.0	23.5	48.5		18.5	43.5	43.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	1.5	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.5		6.5	6.5	6.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max		None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	0
Act Effct Green (s)	16.1	24.6	24.6	8.8	12.1	12.1	18.2	48.9		12.6	43.3	43.3
Actuated g/C Ratio	0.14	0.21	0.21	0.08	0.11	0.11	0.16	0.43		0.11	0.38	0.38
v/c Ratio	0.67	0.49	0.53	0.21	0.55	0.27	0.73	0.38		0.57	0.28	0.17
Control Delay (s/veh)	61.4	44.2	8.4	55.7	55.9	4.3	63.0	25.2		61.8	27.6	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	61.4	44.2	8.4	55.7	55.9	4.3	63.0	25.2		61.8	27.6	5.9
LOS	E	D	A	E	E	A	E	C		E	C	A
Approach Delay (s/veh)		34.5			43.2			35.1			29.7	
Approach LOS		C			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 114.9			
Natural Cycle: 135			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 34.6		Intersection LOS: C	
Intersection Capacity Utilization 54.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 10: SH 35/SH35 & Bailey Road

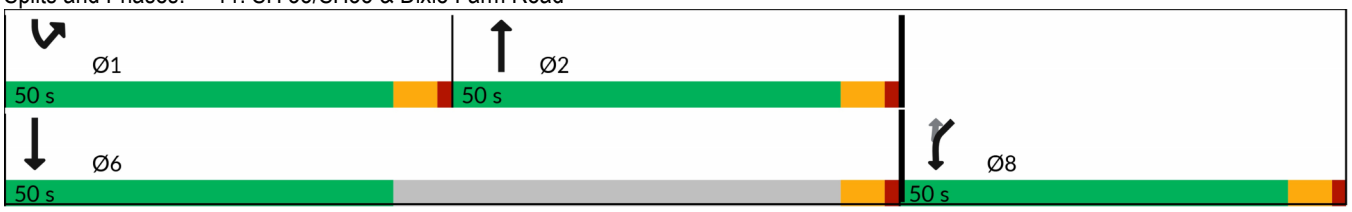


Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	520	472	233	694	557	191
Future Volume (vph)	520	472	233	694	557	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	320		180	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	1.00
Frt	0.929					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3288	0	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3288	0	1770	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	153					208
Link Speed (mph)	30			30	30	
Link Distance (ft)	8103			6422	2765	
Travel Time (s)	184.2			146.0	62.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	565	513	253	754	605	208
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1078	0	253	754	605	208
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		5.0	15.0	5.0	5.0
Minimum Split (s)	45.0		30.0	45.0	30.0	30.0
Total Split (s)	50.0		50.0	50.0	50.0	50.0
Total Split (%)	33.3%		33.3%	33.3%	33.3%	33.3%
Maximum Green (s)	43.5		43.5	43.5	43.5	43.5
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0
All-Red Time (s)	1.5		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		6.5	6.5	6.5	6.5
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		None	Max	None	None
Walk Time (s)	7.0			7.0	7.0	7.0
Flash Don't Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	44.0		21.5	72.0	25.6	25.6
Actuated g/C Ratio	0.40		0.19	0.65	0.23	0.23
v/c Ratio	0.77		0.74	0.33	0.76	0.40
Control Delay (s/veh)	30.9		56.2	9.6	47.0	7.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.9		56.2	9.6	47.0	7.1
LOS	C		E	A	D	A
Approach Delay (s/veh)	30.9			21.3	36.8	
Approach LOS	C			C	D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 110.8			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 29.2		Intersection LOS: C	
Intersection Capacity Utilization 74.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: SH 35/SH35 & Dixie Farm Road

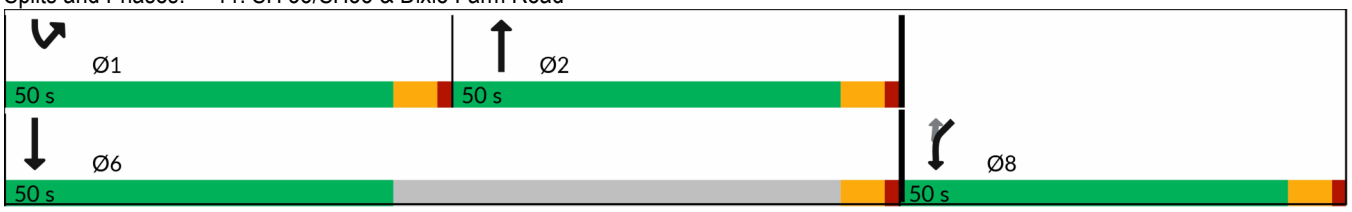


Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	621	592	234	362	333	197
Future Volume (vph)	621	592	234	362	333	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	320		180	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	1.00
Frt	0.927					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3281	0	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3281	0	1770	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	161					214
Link Speed (mph)	30			30	30	
Link Distance (ft)	8103			6422	2765	
Travel Time (s)	184.2			146.0	62.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	675	643	254	393	362	214
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1318	0	254	393	362	214
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	15.0		5.0	15.0	5.0	5.0
Minimum Split (s)	45.0		30.0	45.0	30.0	30.0
Total Split (s)	50.0		50.0	50.0	50.0	50.0
Total Split (%)	33.3%		33.3%	33.3%	33.3%	33.3%
Maximum Green (s)	43.5		43.5	43.5	43.5	43.5
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0
All-Red Time (s)	1.5		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		6.5	6.5	6.5	6.5
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Max		None	Max	None	None
Walk Time (s)	7.0			7.0	7.0	7.0
Flash Don't Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	43.8		19.6	70.0	16.3	16.3
Actuated g/C Ratio	0.44		0.20	0.70	0.16	0.16
v/c Ratio	0.86		0.73	0.16	0.65	0.49
Control Delay (s/veh)	30.1		50.4	5.3	45.1	9.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.1		50.4	5.3	45.1	9.4
LOS	C		D	A	D	A
Approach Delay (s/veh)	30.1			23.0	31.8	
Approach LOS	C			C	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 99.4			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 28.7		Intersection LOS: C	
Intersection Capacity Utilization 74.9%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: SH 35/SH35 & Dixie Farm Road



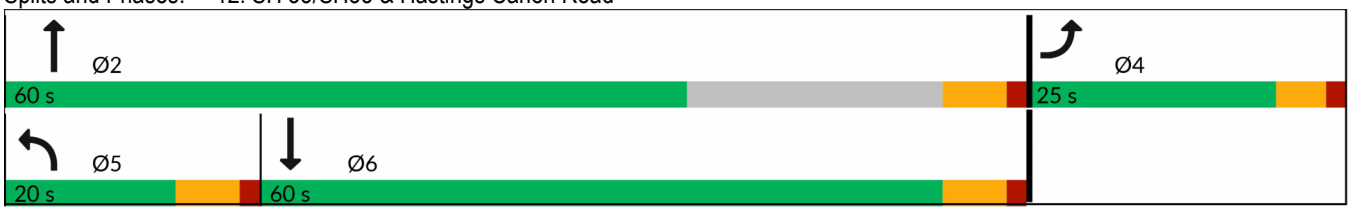


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	97	166	911	1160	87
Future Volume (vph)	45	97	166	911	1160	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	180			0
Storage Lanes	1	0	1			0
Taper Length (ft)	0		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.908				0.989	
Flt Protected	0.984		0.950			
Satd. Flow (prot)	1664	0	1770	3539	3500	0
Flt Permitted	0.984		0.950			
Satd. Flow (perm)	1664	0	1770	3539	3500	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	90				11	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1279			693	8103	
Travel Time (s)	29.1			15.8	184.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	105	180	990	1261	95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	154	0	180	990	1356	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (ft)	20		20	100	100	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	20		20	6	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4		5	2	6	
Switch Phase						
Minimum Initial (s)	5.0		5.0	20.0	20.0	
Minimum Split (s)	25.0		20.0	60.0	60.0	
Total Split (s)	25.0		20.0	60.0	60.0	
Total Split (%)	23.8%		19.0%	57.1%	57.1%	
Maximum Green (s)	19.5		13.5	53.5	53.5	
Yellow Time (s)	4.0		5.0	5.0	5.0	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.5		6.5	6.5	6.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	Max	None	
Walk Time (s)	7.0			5.0	5.0	
Flash Don't Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	9.3		12.5	62.8	43.6	
Actuated g/C Ratio	0.11		0.15	0.74	0.52	
v/c Ratio	0.59		0.68	0.38	0.75	
Control Delay (s/veh)	26.8		51.0	4.5	19.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	26.8		51.0	4.5	19.3	
LOS	C		D	A	B	
Approach Delay (s/veh)	26.8			11.6	19.3	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 84.3			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay (s/veh): 16.4		Intersection LOS: B	
Intersection Capacity Utilization 67.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: SH 35/SH35 & Hastings Canon Road



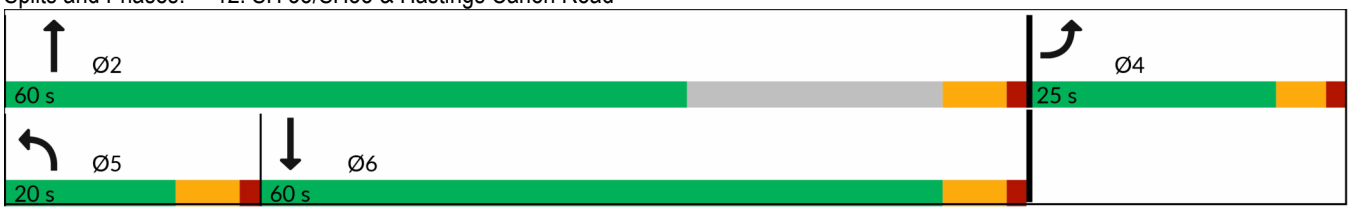


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	69	228	92	1148	678	37
Future Volume (vph)	69	228	92	1148	678	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	180			0
Storage Lanes	1	0	1			0
Taper Length (ft)	0		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.896				0.992	
Flt Protected	0.989		0.950			
Satd. Flow (prot)	1651	0	1770	3539	3511	0
Flt Permitted	0.989		0.950			
Satd. Flow (perm)	1651	0	1770	3539	3511	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	139				8	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1279			693	8103	
Travel Time (s)	29.1			15.8	184.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	248	100	1248	737	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	323	0	100	1248	777	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (ft)	20		20	100	100	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	20		20	6	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4		5	2	6	
Switch Phase						
Minimum Initial (s)	5.0		5.0	20.0	20.0	
Minimum Split (s)	25.0		20.0	60.0	60.0	
Total Split (s)	25.0		20.0	60.0	60.0	
Total Split (%)	23.8%		19.0%	57.1%	57.1%	
Maximum Green (s)	19.5		13.5	53.5	53.5	
Yellow Time (s)	4.0		5.0	5.0	5.0	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.5		6.5	6.5	6.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	Max	None	
Walk Time (s)	7.0			5.0	5.0	
Flash Don't Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	14.8		9.9	53.6	40.1	
Actuated g/C Ratio	0.18		0.12	0.67	0.50	
v/c Ratio	0.77		0.46	0.53	0.44	
Control Delay (s/veh)	30.7		40.3	8.5	16.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	30.7		40.3	8.5	16.3	
LOS	C		D	A	B	
Approach Delay (s/veh)	30.7			10.9	16.3	
Approach LOS	C			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 80.5			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 15.2		Intersection LOS: B	
Intersection Capacity Utilization 59.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: SH 35/SH35 & Hastings Canon Road

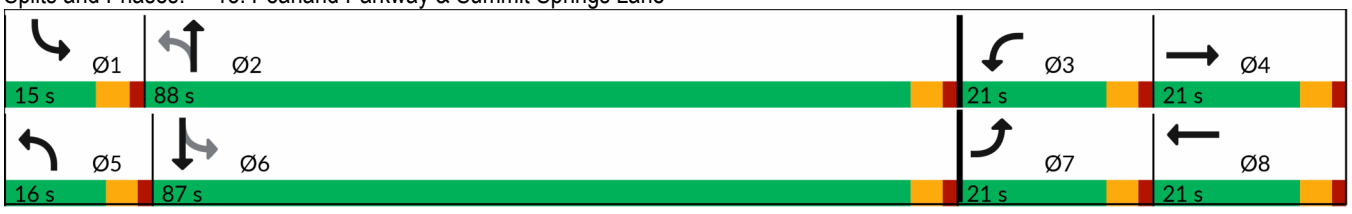


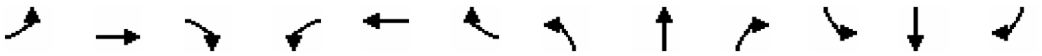
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	2	27	8	1	6	140	800	9	13	1354	53
Future Volume (vph)	47	2	27	8	1	6	140	800	9	13	1354	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	180		150	180		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.860			0.869			0.998			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1602	0	1770	1619	0	1770	3532	0	1770	3518	0
Flt Permitted	0.950			0.950			0.108			0.323		
Satd. Flow (perm)	1770	1602	0	1770	1619	0	201	3532	0	602	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			7			1			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1005			878			1367			830	
Travel Time (s)		22.8			20.0			31.1			18.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	2	29	9	1	7	152	870	10	14	1472	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	31	0	9	8	0	152	880	0	14	1530	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		0	6		0	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex					Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		15.0	45.0		15.0	45.0	
Total Split (s)	21.0	21.0		21.0	21.0		16.0	88.0		15.0	87.0	
Total Split (%)	14.5%	14.5%		14.5%	14.5%		11.0%	60.7%		10.3%	60.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		11.0	83.0		10.0	82.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	9.2	9.2		8.1	8.1		90.9	88.0		82.8	77.1	
Actuated g/C Ratio	0.08	0.08		0.07	0.07		0.83	0.80		0.75	0.70	
v/c Ratio	0.34	0.19		0.07	0.06		0.52	0.31		0.03	0.62	
Control Delay (s/veh)	56.4	22.0		53.9	33.1		11.9	5.3		3.8	11.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	56.4	22.0		53.9	33.1		11.9	5.3		3.8	11.8	
LOS	E	C		D	C		B	A		A	B	
Approach Delay (s/veh)		43.4			44.1			6.3			11.7	
Approach LOS		D			D			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 109.7			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 10.8		Intersection LOS: B	
Intersection Capacity Utilization 68.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 13: Pearland Parkway & Summit Springs Lane



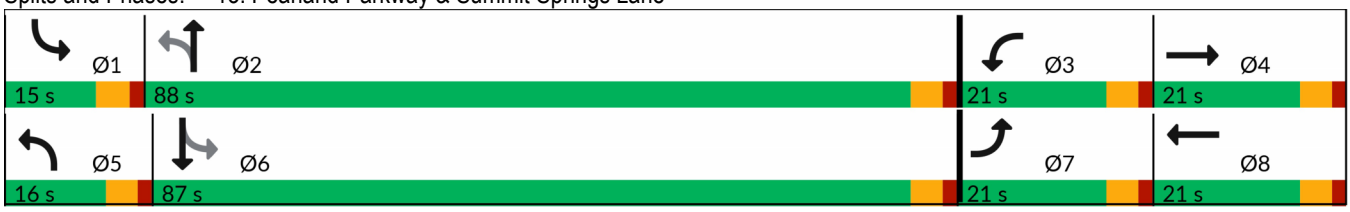


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	2	50	8	0	24	97	1458	6	7	713	44
Future Volume (vph)	110	2	50	8	0	24	97	1458	6	7	713	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	180		150	180		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.855			0.850			0.999			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1593	0	1770	1583	0	1770	3536	0	1770	3507	0
Flt Permitted	0.950			0.950			0.281			0.110		
Satd. Flow (perm)	1770	1593	0	1770	1583	0	523	3536	0	205	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			160						7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1005			878			1367			830	
Travel Time (s)		22.8			20.0			31.1			18.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	2	54	9	0	26	105	1585	7	8	775	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	56	0	9	26	0	105	1592	0	8	823	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		0	6		0	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex					Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		15.0	45.0		15.0	45.0	
Total Split (s)	21.0	21.0		21.0	21.0		16.0	88.0		15.0	87.0	
Total Split (%)	14.5%	14.5%		14.5%	14.5%		11.0%	60.7%		10.3%	60.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		11.0	83.0		10.0	82.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	12.6	17.6		8.1	8.1		86.2	84.5		79.4	73.7	
Actuated g/C Ratio	0.11	0.15		0.07	0.07		0.74	0.73		0.68	0.63	
v/c Ratio	0.63	0.20		0.07	0.10		0.22	0.62		0.04	0.37	
Control Delay (s/veh)	66.3	15.0		57.6	0.8		6.5	11.4		6.4	12.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	66.3	15.0		57.6	0.8		6.5	11.4		6.4	12.0	
LOS	E	B		E	A		A	B		A	B	
Approach Delay (s/veh)		50.0			15.4			11.1			11.9	
Approach LOS		D			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 116.4			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 13.9		Intersection LOS: B	
Intersection Capacity Utilization 69.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 13: Pearland Parkway & Summit Springs Lane

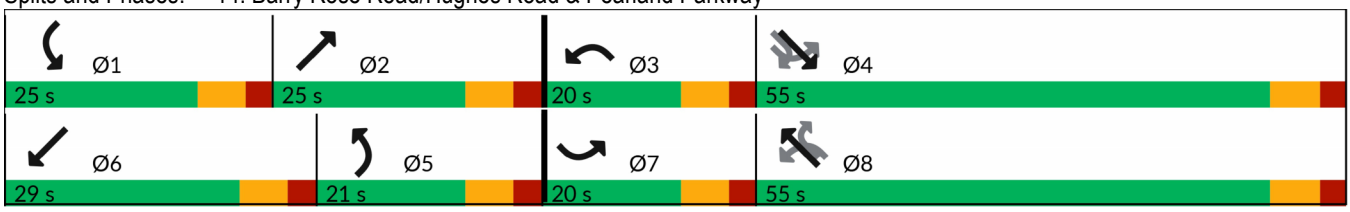


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	232	902	174	27	650	305	136	225	26	268	224	178
Future Volume (vph)	232	902	174	27	650	305	136	225	26	268	224	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		120	120		150	120		120	120		120
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.985			0.934	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3486	0	1770	3306	0
Flt Permitted	0.184			0.185			0.950			0.950		
Satd. Flow (perm)	343	3539	1583	345	3539	1583	1770	3486	0	1770	3306	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			157			292		8			141	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		810			670			666			826	
Travel Time (s)		18.4			15.2			15.1			18.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	252	980	189	29	707	332	148	245	28	291	243	193
Shared Lane Traffic (%)												
Lane Group Flow (vph)	252	980	189	29	707	332	148	273	0	291	436	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0	0	0	0	0	0	2		0	2	
Detector Template	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	0	0	0	0	0	0	100		0	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	0	0	0	0	0	0	0	6		0	6	
Detector 1 Type								Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	25.0		25.0	25.0	
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	21.0	25.0		25.0	29.0	
Total Split (%)	16.0%	44.0%	44.0%	16.0%	44.0%	44.0%	16.8%	20.0%		20.0%	23.2%	
Maximum Green (s)	13.0	48.0	48.0	13.0	48.0	48.0	14.0	18.0		18.0	22.0	
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	None	
Walk Time (s)		5.0	5.0		5.0	5.0		5.0		5.0	5.0	
Flash Don't Walk (s)		11.0	11.0		11.0	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0		0	0	
Act Effct Green (s)	47.9	40.5	40.5	35.1	28.7	28.7	20.8	18.1		18.1	15.4	
Actuated g/C Ratio	0.45	0.38	0.38	0.33	0.27	0.27	0.20	0.17		0.17	0.15	
v/c Ratio	0.77	0.72	0.27	0.14	0.74	0.52	0.43	0.45		0.96	0.73	
Control Delay (s/veh)	34.9	32.4	7.0	17.3	39.8	8.3	45.9	42.5		88.6	36.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	34.9	32.4	7.0	17.3	39.8	8.3	45.9	42.5		88.6	36.6	
LOS	C	C	A	B	D	A	D	D		F	D	
Approach Delay (s/veh)		29.5			29.4			43.7			57.4	
Approach LOS		C			C			D			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 105.8			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay (s/veh): 36.7		Intersection LOS: D	
Intersection Capacity Utilization 76.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 14: Barry Rose Road/Hughes Road & Pearland Parkway



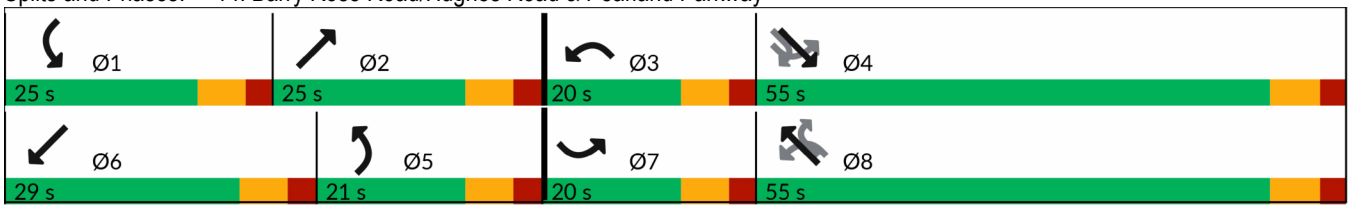
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	173	480	91	2	856	91	203	85	13	136	149	438
Future Volume (vph)	173	480	91	2	856	91	203	85	13	136	149	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		120	120		150	120		120	120		120
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.980			0.888	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3468	0	1770	3143	0
Flt Permitted	0.125			0.459			0.950			0.950		
Satd. Flow (perm)	233	3539	1583	855	3539	1583	1770	3468	0	1770	3143	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			157			157		11			231	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		810			670			666			826	
Travel Time (s)		18.4			15.2			15.1			18.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	188	522	99	2	930	99	221	92	14	148	162	476
Shared Lane Traffic (%)												
Lane Group Flow (vph)	188	522	99	2	930	99	221	106	0	148	638	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0	0	0	0	0	0	2		0	2	
Detector Template	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	0	0	0	0	0	0	100		0	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	0	0	0	0	0	0	0	6		0	6	
Detector 1 Type								Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	25.0		25.0	25.0	
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	21.0	25.0		25.0	29.0	
Total Split (%)	16.0%	44.0%	44.0%	16.0%	44.0%	44.0%	16.8%	20.0%		20.0%	23.2%	
Maximum Green (s)	13.0	48.0	48.0	13.0	48.0	48.0	14.0	18.0		18.0	22.0	
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	None	
Walk Time (s)		5.0	5.0		5.0	5.0		5.0		5.0	5.0	
Flash Don't Walk (s)		11.0	11.0		11.0	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0		0	0	
Act Effct Green (s)	53.3	51.1	51.1	39.5	33.9	33.9	14.2	19.8		13.7	19.4	
Actuated g/C Ratio	0.49	0.47	0.47	0.37	0.31	0.31	0.13	0.18		0.13	0.18	
v/c Ratio	0.65	0.31	0.12	0.01	0.84	0.16	0.95	0.16		0.66	1.01dr	
Control Delay (s/veh)	28.6	19.0	0.8	14.5	42.4	1.1	97.9	37.4		61.2	39.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	28.6	19.0	0.8	14.5	42.4	1.1	97.9	37.4		61.2	39.4	
LOS	C	B	A	B	D	A	F	D		E	D	
Approach Delay (s/veh)		19.0			38.4			78.3			43.5	
Approach LOS		B			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 108.2			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay (s/veh): 38.8		Intersection LOS: D	
Intersection Capacity Utilization 86.1%		ICU Level of Service E	
Analysis Period (min) 15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 14: Barry Rose Road/Hughes Road & Pearland Parkway

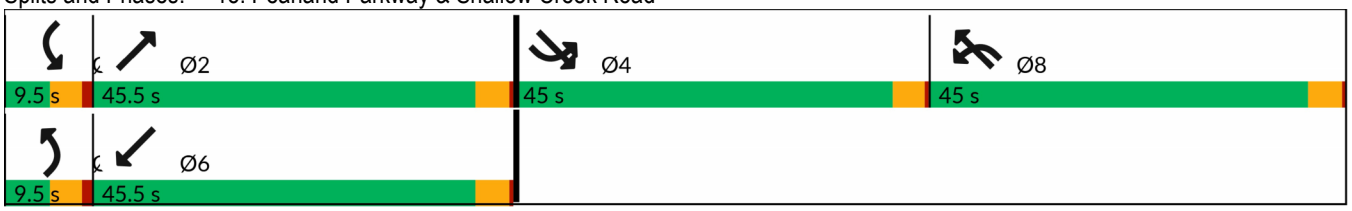


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	177	5	15	26	1	15	23	815	7	38	1004	136
Future Volume (vph)	177	5	15	26	1	15	23	815	7	38	1004	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	200		150	120		150
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.947			0.999			0.982	
Flt Protected		0.957			0.970		0.950			0.950		
Satd. Flow (prot)	0	3350	0	0	3251	0	1770	3536	0	1770	3476	0
Flt Permitted		0.957			0.970		0.950			0.950		
Satd. Flow (perm)	0	3350	0	0	3251	0	1770	3536	0	1770	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			16			1			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		299			285			1148			332	
Travel Time (s)		6.8			6.5			26.1			7.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	5	16	28	1	16	25	886	8	41	1091	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	213	0	0	45	0	25	894	0	41	1239	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		0	0		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	20	0		20	0		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		9.5	45.0		9.5	45.0	
Total Split (s)	45.0	45.0		45.0	45.0		9.5	45.5		9.5	45.5	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		6.6%	31.4%		6.6%	31.4%	
Maximum Green (s)	41.0	41.0		41.0	41.0		5.0	41.5		5.0	41.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		10.1			6.3		5.0	44.3		5.0	48.3	
Actuated g/C Ratio		0.13			0.08		0.07	0.58		0.07	0.64	
v/c Ratio		0.47			0.16		0.21	0.43		0.35	0.56	
Control Delay (s/veh)		34.0			26.6		40.8	11.5		45.0	11.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		34.0			26.6		40.8	11.5		45.0	11.6	
LOS		C			C		D	B		D	B	
Approach Delay (s/veh)		34.0			26.6			12.3			12.6	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 76			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 14.6		Intersection LOS: B	
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: Pearland Parkway & Shallow Creek Road

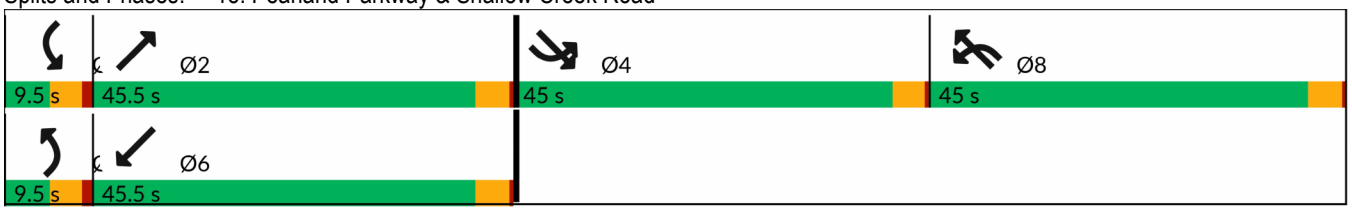


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	23	1	0	32	0	30	12	841	30	9	541	40
Future Volume (vph)	23	1	0	32	0	30	12	841	30	9	541	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	200		150	120		150
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt					0.927			0.995			0.990	
Flt Protected		0.954			0.975		0.950			0.950		
Satd. Flow (prot)	0	3376	0	0	3199	0	1770	3522	0	1770	3504	0
Flt Permitted		0.954			0.975		0.950			0.950		
Satd. Flow (perm)	0	3376	0	0	3199	0	1770	3522	0	1770	3504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					71			2			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		299			285			1148			332	
Travel Time (s)		6.8			6.5			26.1			7.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	1	0	35	0	33	13	914	33	10	588	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	0	0	68	0	13	947	0	10	631	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		0	0		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	20	0		20	0		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		9.5	45.0		9.5	45.0	
Total Split (s)	45.0	45.0		45.0	45.0		9.5	45.5		9.5	45.5	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		6.6%	31.4%		6.6%	31.4%	
Maximum Green (s)	41.0	41.0		41.0	41.0		5.0	41.5		5.0	41.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		6.0			5.8		5.0	52.3		5.0	52.3	
Actuated g/C Ratio		0.09			0.08		0.07	0.76		0.07	0.76	
v/c Ratio		0.09			0.20		0.10	0.35		0.08	0.24	
Control Delay (s/veh)		31.1			10.4		33.8	5.5		33.3	4.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		31.1			10.4		33.8	5.5		33.3	4.8	
LOS		C			B		C	A		C	A	
Approach Delay (s/veh)		31.1			10.4			5.9			5.3	
Approach LOS		C			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 68.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.35			
Intersection Signal Delay (s/veh): 6.2		Intersection LOS: A	
Intersection Capacity Utilization 39.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 15: Pearland Parkway & Shallow Creek Road

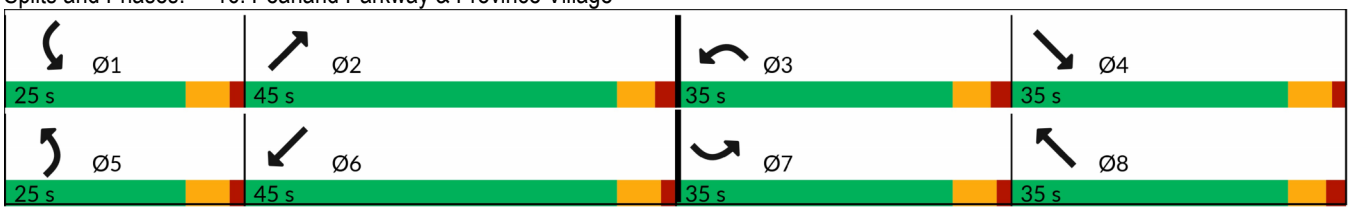


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	165	18	99	52	14	99	163	625	33	74	928	47
Future Volume (vph)	165	18	99	52	14	99	163	625	33	74	928	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		800	0		150	200		150	120		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	0			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.873			0.868			0.992			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1626	0	1770	1617	0	1770	3511	0	1770	3514	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1626	0	1770	1617	0	1770	3511	0	1770	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		108			108			4			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		737			805			403			1148	
Travel Time (s)		16.8			18.3			9.2			26.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	20	108	57	15	108	177	679	36	80	1009	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	128	0	57	123	0	177	715	0	80	1060	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		0	6		0	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex					Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	5.0		3.0	5.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		25.0	35.0		25.0	35.0	
Total Split (s)	35.0	35.0		35.0	35.0		25.0	45.0		25.0	45.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		17.9%	32.1%		17.9%	32.1%	
Maximum Green (s)	29.0	29.0		29.0	29.0		19.0	39.0		19.0	39.0	
Yellow Time (s)	4.5	4.5		4.0	4.0		4.5	4.0		4.5	4.5	
All-Red Time (s)	1.5	1.5		2.0	2.0		1.5	2.0		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		Max	Max		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	18.0	18.0		29.1	29.1		16.6	47.5		11.1	39.1	
Actuated g/C Ratio	0.14	0.14		0.23	0.23		0.13	0.37		0.09	0.31	
v/c Ratio	0.71	0.40		0.14	0.27		0.77	0.54		0.52	0.98	
Control Delay (s/veh)	68.3	16.2		42.7	12.0		75.5	35.1		68.4	66.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	68.3	16.2		42.7	12.0		75.5	35.1		68.4	66.2	
LOS	E	B		D	B		E	D		E	E	
Approach Delay (s/veh)		46.6			21.7			43.1			66.3	
Approach LOS		D			C			D			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 127			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay (s/veh): 52.5		Intersection LOS: D	
Intersection Capacity Utilization 67.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Pearland Parkway & Province Village

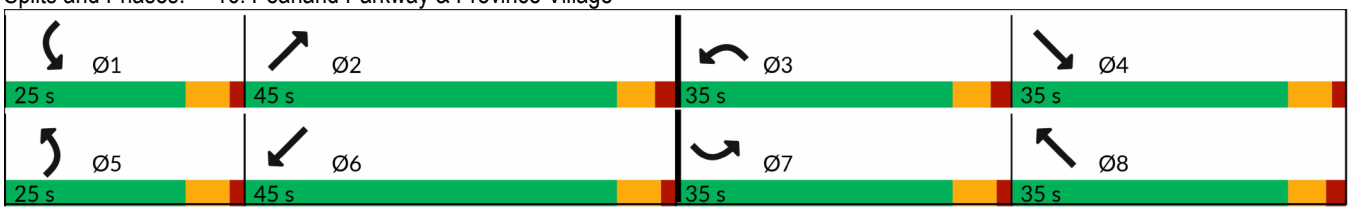


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	39	6	20	19	7	89	53	706	19	29	588	23
Future Volume (vph)	39	6	20	19	7	89	53	706	19	29	588	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		800	0		150	200		150	120		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	0			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.886			0.861			0.996			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1650	0	1770	1604	0	1770	3525	0	1770	3518	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1650	0	1770	1604	0	1770	3525	0	1770	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			97			2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		737			805			403			1148	
Travel Time (s)		16.8			18.3			9.2			26.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	42	7	22	21	8	97	58	767	21	32	639	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	29	0	21	105	0	58	788	0	32	664	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		0	6		0	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex					Cl+Ex		
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	5.0		3.0	5.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		25.0	35.0		25.0	35.0	
Total Split (s)	35.0	35.0		35.0	35.0		25.0	45.0		25.0	45.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		17.9%	32.1%		17.9%	32.1%	
Maximum Green (s)	29.0	29.0		29.0	29.0		19.0	39.0		19.0	39.0	
Yellow Time (s)	4.5	4.5		4.0	4.0		4.5	4.0		4.5	4.5	
All-Red Time (s)	1.5	1.5		2.0	2.0		1.5	2.0		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		Max	Max		None	Max		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	7.9	7.6		29.7	29.7		8.8	39.9		7.4	35.6	
Actuated g/C Ratio	0.08	0.08		0.30	0.30		0.09	0.41		0.08	0.36	
v/c Ratio	0.29	0.20		0.04	0.19		0.36	0.55		0.24	0.52	
Control Delay (s/veh)	51.8	26.4		30.3	8.9		52.2	26.4		51.5	28.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	51.8	26.4		30.3	8.9		52.2	26.4		51.5	28.2	
LOS	D	C		C	A		D	C		D	C	
Approach Delay (s/veh)		41.5			12.4			28.2			29.2	
Approach LOS		D			B			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 97.8			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 28.0		Intersection LOS: C	
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 16: Pearland Parkway & Province Village

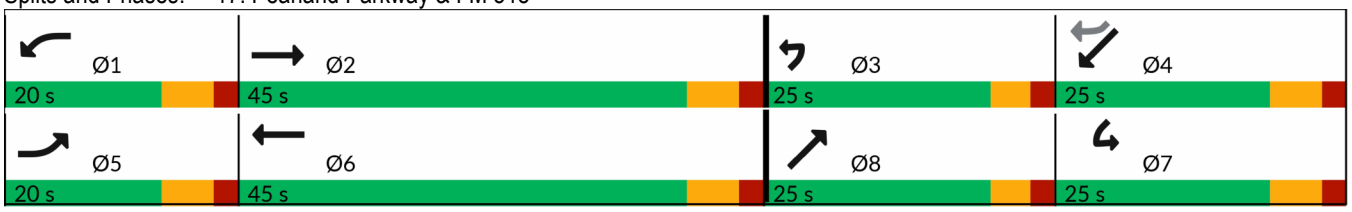


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	150	963	150	183	870	321	162	457	79	422	580	155
Future Volume (vph)	150	963	150	183	870	321	162	457	79	422	580	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		150	150		150	120		150	450		150
Storage Lanes	1		0	1		0	1		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.95	1.00
Frt		0.980			0.960			0.978				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3398	0	1770	3461	0	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3468	0	1770	3398	0	1770	3461	0	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			49			15				147
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1215			1637			473			570	
Travel Time (s)		27.6			37.2			10.8			13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	1047	163	199	946	349	176	497	86	459	630	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	163	1210	0	199	1295	0	176	583	0	459	630	168
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		0	2		0	0		0	0	0
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	Thru
Leading Detector (ft)	0	100		0	100		0	0		0	0	0
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	0	6		0	6		0	0		0	0	0
Detector 1 Type		Cl+Ex			Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0		5.0	5.0		7.0	7.0	7.0
Minimum Split (s)	20.0	45.0		20.0	45.0		25.0	25.0		25.0	25.0	25.0
Total Split (s)	20.0	45.0		20.0	45.0		25.0	25.0		25.0	25.0	25.0
Total Split (%)	17.4%	39.1%		17.4%	39.1%		21.7%	21.7%		21.7%	21.7%	21.7%
Maximum Green (s)	13.5	38.5		13.5	38.5		19.5	19.5		18.5	18.5	18.5
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		4.5	4.5	4.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5		6.5	6.5		5.5	5.5		6.5	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max		None	None	None
Walk Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	5.0
Flash Don't Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	13.0	38.5		13.5	39.0		19.5	19.5		18.5	18.5	18.5
Actuated g/C Ratio	0.11	0.33		0.12	0.34		0.17	0.17		0.16	0.16	0.16
v/c Ratio	0.82	1.03		0.96	1.09		0.59	0.97		0.83	1.11	0.44
Control Delay (s/veh)	80.3	72.7		104.5	90.6		52.9	77.4		60.8	115.3	13.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	80.3	72.7		104.5	90.6		52.9	77.4		60.8	115.3	13.7
LOS	F	E		F	F		D	E		E	F	B
Approach Delay (s/veh)		73.6			92.5			71.8			81.8	
Approach LOS		E			F			E			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 115			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay (s/veh): 81.2		Intersection LOS: F	
Intersection Capacity Utilization 90.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 17: Pearland Parkway & FM 518

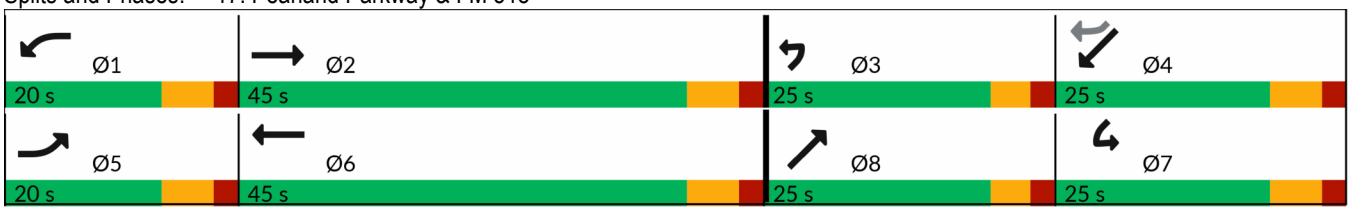


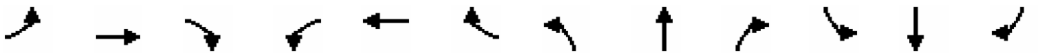
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	91	731	96	126	854	302	132	393	100	254	293	74
Future Volume (vph)	91	731	96	126	854	302	132	393	100	254	293	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		150	150		150	120		150	450		150
Storage Lanes	1		0	1		0	1		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.95	1.00
Frt		0.983			0.961			0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3401	0	1770	3430	0	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3479	0	1770	3401	0	1770	3430	0	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			46			24				147
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1215			1637			473			570	
Travel Time (s)		27.6			37.2			10.8			13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	795	104	137	928	328	143	427	109	276	318	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	899	0	137	1256	0	143	536	0	276	318	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		0	2		0	0		0	0	0
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	Thru
Leading Detector (ft)	0	100		0	100		0	0		0	0	0
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	0	6		0	6		0	0		0	0	0
Detector 1 Type		Cl+Ex			Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0		5.0	5.0		7.0	7.0	7.0
Minimum Split (s)	20.0	45.0		20.0	45.0		25.0	25.0		25.0	25.0	25.0
Total Split (s)	20.0	45.0		20.0	45.0		25.0	25.0		25.0	25.0	25.0
Total Split (%)	17.4%	39.1%		17.4%	39.1%		21.7%	21.7%		21.7%	21.7%	21.7%
Maximum Green (s)	13.5	38.5		13.5	38.5		19.5	19.5		18.5	18.5	18.5
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		4.5	4.5	4.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5		6.5	6.5		5.5	5.5		6.5	6.5	6.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		Max	Max		None	None	None
Walk Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	5.0
Flash Don't Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	10.9	37.4		12.1	38.6		19.6	19.6		14.8	14.8	14.8
Actuated g/C Ratio	0.10	0.34		0.11	0.35		0.18	0.18		0.14	0.14	0.14
v/c Ratio	0.56	0.75		0.70	1.02		0.45	0.84		0.59	0.66	0.23
Control Delay (s/veh)	59.9	36.3		66.6	64.4		46.4	55.3		50.0	52.0	1.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	59.9	36.3		66.6	64.4		46.4	55.3		50.0	52.0	1.6
LOS	E	D		E	E		D	E		D	D	A
Approach Delay (s/veh)		38.6			64.6			53.4			45.2	
Approach LOS		D			E			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 108.9			
Natural Cycle: 115			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay (s/veh): 52.2		Intersection LOS: D	
Intersection Capacity Utilization 80.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 17: Pearland Parkway & FM 518



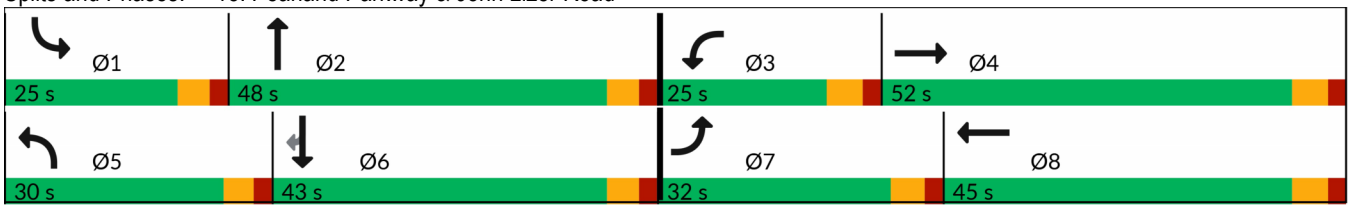


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	229	167	84	78	241	20	132	414	88	22	492	309
Future Volume (vph)	229	167	84	78	241	20	132	414	88	22	492	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		100	100		100	100		150
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.950			0.988			0.974				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1770	0	1770	1840	0	1770	3447	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1770	0	1770	1840	0	1770	3447	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			3			17				267
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1007			1264			3595			815	
Travel Time (s)		22.9			28.7			81.7			18.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	249	182	91	85	262	22	143	450	96	24	535	336
Shared Lane Traffic (%)												
Lane Group Flow (vph)	249	273	0	85	284	0	143	546	0	24	535	336
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			72			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		1	2		1	0		0	0	0
Detector Template	Thru	Thru		Left	Thru		Left	Thru		Thru	Thru	Thru
Leading Detector (ft)	0	100		20	100		20	0		0	0	0
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	0	6		20	6		20	0		0	0	0
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex					
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	30.0	45.0		25.0	45.0		30.0	30.0		25.0	25.0	25.0
Total Split (s)	32.0	52.0		25.0	45.0		30.0	48.0		25.0	43.0	43.0
Total Split (%)	21.3%	34.7%		16.7%	30.0%		20.0%	32.0%		16.7%	28.7%	28.7%
Maximum Green (s)	26.0	46.0		19.0	39.0		24.5	42.5		19.5	37.5	37.5
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	5.0
Flash Don't Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	20.9	36.2		11.1	22.6		14.7	36.1		7.3	22.9	22.9
Actuated g/C Ratio	0.20	0.34		0.11	0.21		0.14	0.34		0.07	0.22	0.22
v/c Ratio	0.71	0.44		0.46	0.72		0.58	0.46		0.20	0.70	0.61
Control Delay (s/veh)	54.6	31.3		58.3	50.9		56.3	30.3		58.5	45.1	15.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	54.6	31.3		58.3	50.9		56.3	30.3		58.5	45.1	15.0
LOS	D	C		E	D		E	C		E	D	B
Approach Delay (s/veh)		42.4			52.6			35.7			34.2	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 105.3			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay (s/veh): 39.1		Intersection LOS: D	
Intersection Capacity Utilization 66.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 18: Pearland Parkway & John Lizer Road

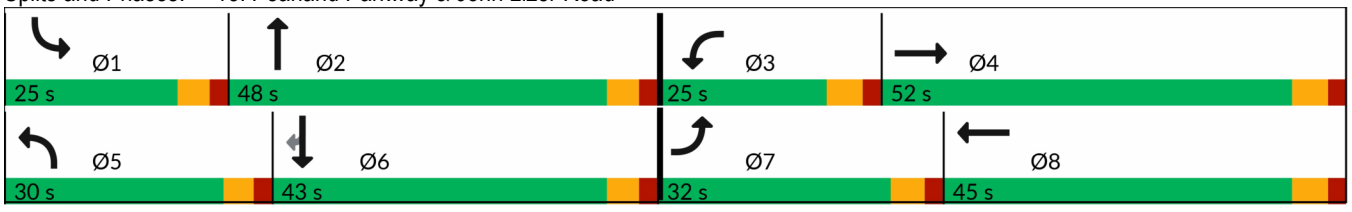


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	223	235	89	98	167	12	157	389	150	15	297	155
Future Volume (vph)	223	235	89	98	167	12	157	389	150	15	297	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		100	100		100	100		150
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.959			0.990			0.958				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1786	0	1770	1844	0	1770	3391	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1786	0	1770	1844	0	1770	3391	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			2			38				168
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1007			1264			3595			815	
Travel Time (s)		22.9			28.7			81.7			18.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	242	255	97	107	182	13	171	423	163	16	323	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	242	352	0	107	195	0	171	586	0	16	323	168
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			72			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		1	2		1	0		0	0	0
Detector Template	Thru	Thru		Left	Thru		Left	Thru		Thru	Thru	Thru
Leading Detector (ft)	0	100		20	100		20	0		0	0	0
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	0	6		20	6		20	0		0	0	0
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex					
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	30.0	45.0		25.0	45.0		30.0	30.0		25.0	25.0	25.0
Total Split (s)	32.0	52.0		25.0	45.0		30.0	48.0		25.0	43.0	43.0
Total Split (%)	21.3%	34.7%		16.7%	30.0%		20.0%	32.0%		16.7%	28.7%	28.7%
Maximum Green (s)	26.0	46.0		19.0	39.0		24.5	42.5		19.5	37.5	37.5
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	5.0
Flash Don't Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	19.1	24.0		11.7	16.7		15.2	31.5		6.8	14.8	14.8
Actuated g/C Ratio	0.21	0.27		0.13	0.19		0.17	0.35		0.08	0.16	0.16
v/c Ratio	0.65	0.72		0.47	0.57		0.57	0.48		0.12	0.55	0.42
Control Delay (s/veh)	44.0	39.6		47.8	42.2		45.7	25.9		49.8	41.1	10.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	44.0	39.6		47.8	42.2		45.7	25.9		49.8	41.1	10.2
LOS	D	D		D	D		D	C		D	D	B
Approach Delay (s/veh)		41.4			44.2			30.3			31.1	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 90			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay (s/veh): 35.5		Intersection LOS: D	
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 18: Pearland Parkway & John Lizer Road

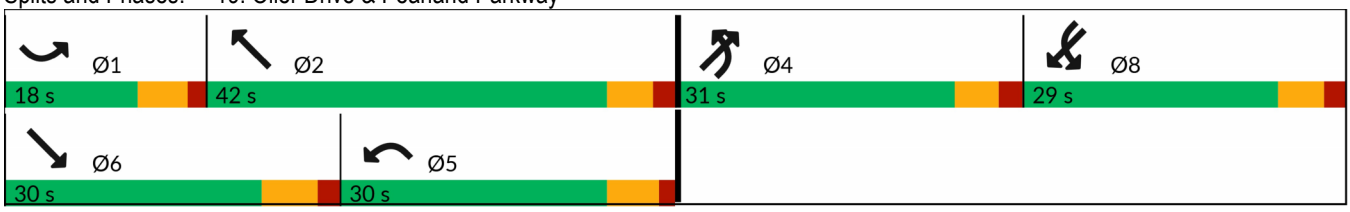


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	106	413	278	306	258	41	257	32	248	29	22	61
Future Volume (vph)	106	413	278	306	258	41	257	32	248	29	22	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	280		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.91	0.91	0.95
Frt		0.940			0.979			0.867			0.894	
Flt Protected	0.950			0.950			0.950			0.950	0.998	
Satd. Flow (prot)	1770	3327	0	1770	3465	0	1770	3068	0	1610	3025	0
Flt Permitted	0.950			0.950			0.950			0.950	0.998	
Satd. Flow (perm)	1770	3327	0	1770	3465	0	1770	3068	0	1610	3025	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		121			15			270			66	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3595			633			739			931	
Travel Time (s)		81.7			14.4			16.8			21.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	449	302	333	280	45	279	35	270	32	24	66
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	115	751	0	333	325	0	279	305	0	29	93	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		62			62			60			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	1	6		5	2		4	4		8	8	
Permitted Phases												

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	20.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	35.0		25.0	35.0		35.0	35.0		25.0	25.0	
Total Split (s)	18.0	30.0		30.0	42.0		31.0	31.0		29.0	29.0	
Total Split (%)	15.0%	25.0%		25.0%	35.0%		25.8%	25.8%		24.2%	24.2%	
Maximum Green (s)	12.0	23.0		24.0	36.0		25.0	25.0		23.0	23.0	
Yellow Time (s)	4.5	5.0		4.5	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	2.0		1.5	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	None		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	10.7	23.5		22.8	36.7		20.6	20.6		7.4	7.4	
Actuated g/C Ratio	0.11	0.24		0.24	0.38		0.21	0.21		0.08	0.08	
v/c Ratio	0.59	0.84		0.80	0.25		0.74	0.35		0.24	0.32	
Control Delay (s/veh)	56.7	40.6		52.2	22.4		49.4	7.4		50.0	21.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	56.7	40.6		52.2	22.4		49.4	7.4		50.0	21.3	
LOS	E	D		D	C		D	A		D	C	
Approach Delay (s/veh)		42.7			37.5			27.5			28.2	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 96.7			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 36.4		Intersection LOS: D	
Intersection Capacity Utilization 74.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 19: Oiler Drive & Pearland Parkway

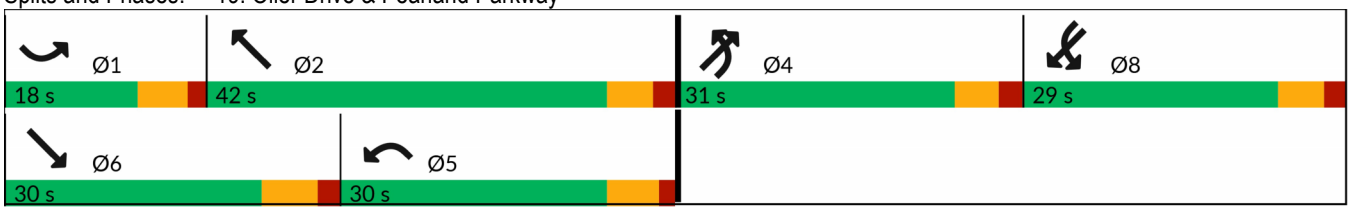


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	38	159	220	222	384	17	193	20	190	38	44	116
Future Volume (vph)	38	159	220	222	384	17	193	20	190	38	44	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	280		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.91	0.91	0.95
Frt		0.913			0.994			0.864			0.894	
Flt Protected	0.950			0.950			0.950			0.950	0.999	
Satd. Flow (prot)	1770	3231	0	1770	3518	0	1770	3058	0	1610	3028	0
Flt Permitted	0.950			0.950			0.950			0.950	0.999	
Satd. Flow (perm)	1770	3231	0	1770	3518	0	1770	3058	0	1610	3028	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		239			4			207			126	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3595			633			739			931	
Travel Time (s)		81.7			14.4			16.8			21.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	173	239	241	417	18	210	22	207	41	48	126
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	41	412	0	241	435	0	210	229	0	37	178	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		62			62			60			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	1	6		5	2		4	4		8	8	
Permitted Phases												

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	20.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	35.0		25.0	35.0		35.0	35.0		25.0	25.0	
Total Split (s)	18.0	30.0		30.0	42.0		31.0	31.0		29.0	29.0	
Total Split (%)	15.0%	25.0%		25.0%	35.0%		25.8%	25.8%		24.2%	24.2%	
Maximum Green (s)	12.0	23.0		24.0	36.0		25.0	25.0		23.0	23.0	
Yellow Time (s)	4.5	5.0		4.5	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	2.0		1.5	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	None		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	7.7	23.4		17.3	39.6		16.5	16.5		7.7	7.7	
Actuated g/C Ratio	0.09	0.26		0.19	0.44		0.18	0.18		0.09	0.09	
v/c Ratio	0.27	0.41		0.71	0.28		0.65	0.31		0.27	0.48	
Control Delay (s/veh)	46.9	14.2		47.5	19.7		45.0	7.7		47.3	19.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	46.9	14.2		47.5	19.7		45.0	7.7		47.3	19.5	
LOS	D	B		D	B		D	A		D	B	
Approach Delay (s/veh)		17.2			29.6			25.5			24.2	
Approach LOS		B			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 90.4			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay (s/veh): 24.8		Intersection LOS: C	
Intersection Capacity Utilization 60.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 19: Oiler Drive & Pearland Parkway

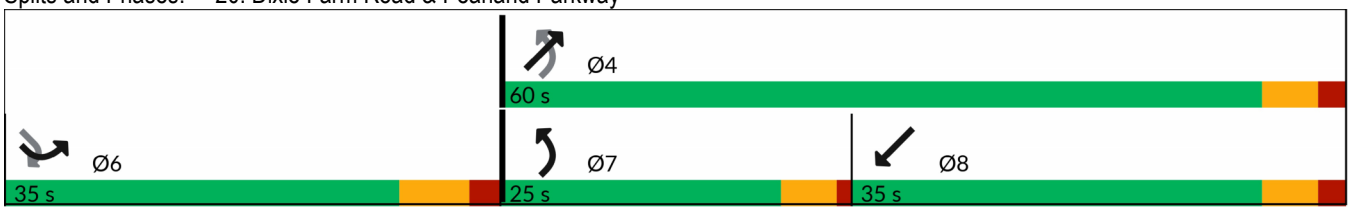


Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	424	119	65	650	645	509
Future Volume (vph)	424	119	65	650	645	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	250			150
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.934	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3306	0
Flt Permitted	0.950		0.117			
Satd. Flow (perm)	3433	1583	218	3539	3306	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		129			215	
Link Speed (mph)	30			30	30	
Link Distance (ft)	884			1122	1114	
Travel Time (s)	20.1			25.5	25.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	461	129	71	707	701	553
Shared Lane Traffic (%)						
Lane Group Flow (vph)	461	129	71	707	1254	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	54			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	6		7	4	8	
Permitted Phases		6	4			

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Detector Phase	6	6	7	4	8	
Switch Phase						
Minimum Initial (s)	20.0	20.0	5.0	15.0	5.0	
Minimum Split (s)	35.0	35.0	25.0	35.0	35.0	
Total Split (s)	35.0	35.0	25.0	60.0	35.0	
Total Split (%)	36.8%	36.8%	26.3%	63.2%	36.8%	
Maximum Green (s)	28.0	28.0	20.0	54.0	29.0	
Yellow Time (s)	5.0	5.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	28.1	28.1	40.7	39.7	29.2	
Actuated g/C Ratio	0.35	0.35	0.50	0.49	0.36	
v/c Ratio	0.39	0.20	0.27	0.41	0.94	
Control Delay (s/veh)	22.0	5.0	12.6	13.7	37.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	22.0	5.0	12.6	13.7	37.4	
LOS	C	A	B	B	D	
Approach Delay (s/veh)	18.2			13.6	37.4	
Approach LOS	B			B	D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 80.9			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay (s/veh): 26.0		Intersection LOS: C	
Intersection Capacity Utilization 70.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 20: Dixie Farm Road & Pearland Parkway

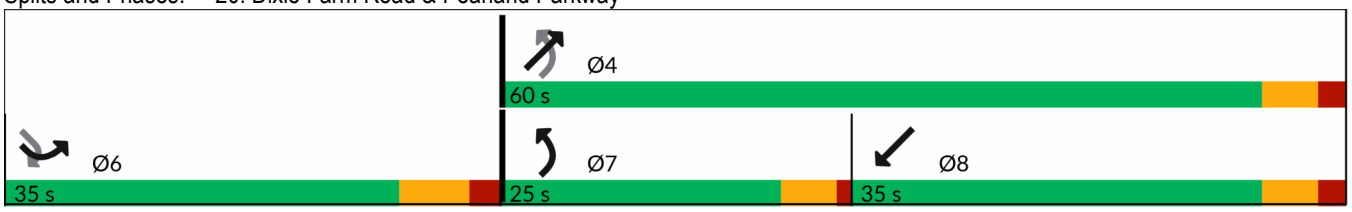


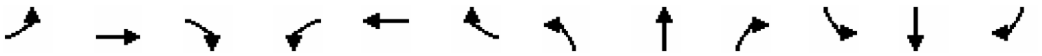
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	348	58	94	746	495	365
Future Volume (vph)	348	58	94	746	495	365
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	250			150
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.936	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3313	0
Flt Permitted	0.950		0.136			
Satd. Flow (perm)	3433	1583	253	3539	3313	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		63			202	
Link Speed (mph)	30			30	30	
Link Distance (ft)	884			1122	1114	
Travel Time (s)	20.1			25.5	25.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	378	63	102	811	538	397
Shared Lane Traffic (%)						
Lane Group Flow (vph)	378	63	102	811	935	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	54			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	6		7	4	8	
Permitted Phases		6	4			

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Detector Phase	6	6	7	4	8	
Switch Phase						
Minimum Initial (s)	20.0	20.0	5.0	15.0	5.0	
Minimum Split (s)	35.0	35.0	25.0	35.0	35.0	
Total Split (s)	35.0	35.0	25.0	60.0	35.0	
Total Split (%)	36.8%	36.8%	26.3%	63.2%	36.8%	
Maximum Green (s)	28.0	28.0	20.0	54.0	29.0	
Yellow Time (s)	5.0	5.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Max	None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	28.7	28.7	36.6	35.6	24.5	
Actuated g/C Ratio	0.37	0.37	0.47	0.46	0.32	
v/c Ratio	0.30	0.10	0.35	0.50	0.79	
Control Delay (s/veh)	20.5	6.3	13.6	15.1	24.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	20.5	6.3	13.6	15.1	24.6	
LOS	C	A	B	B	C	
Approach Delay (s/veh)	18.5			14.9	24.6	
Approach LOS	B			B	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 77.6			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay (s/veh): 19.6		Intersection LOS: B	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 20: Dixie Farm Road & Pearland Parkway



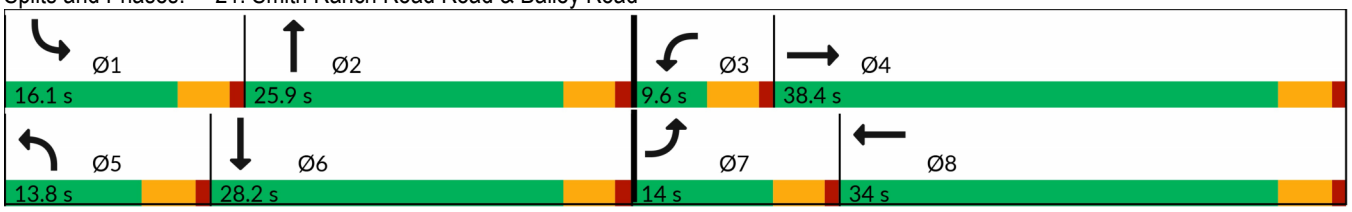


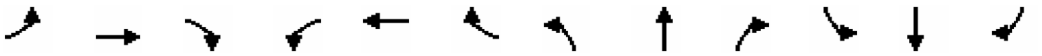
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	564	66	13	620	66	45	17	13	119	44	115
Future Volume (vph)	92	564	66	13	620	66	45	17	13	119	44	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	100		0	100		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.984			0.986			0.934			0.892	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3483	0	1770	3490	0	1770	3306	0	1770	3157	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3483	0	1770	3490	0	1770	3306	0	1770	3157	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			13			14			125	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		930			5111			1029			1098	
Travel Time (s)		21.1			116.2			23.4			25.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	100	613	72	14	674	72	49	18	14	129	48	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	685	0	14	746	0	49	32	0	129	173	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	14.0	38.4		9.6	34.0		13.8	25.9		16.1	28.2	
Total Split (%)	15.6%	42.7%		10.7%	37.8%		15.3%	28.8%		17.9%	31.3%	
Maximum Green (s)	9.5	33.9		5.1	29.5		9.3	21.4		11.6	23.7	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	8.7	31.7		5.4	23.3		7.7	23.5		10.2	27.8	
Actuated g/C Ratio	0.11	0.41		0.07	0.30		0.10	0.30		0.13	0.36	
v/c Ratio	0.51	0.48		0.11	0.71		0.28	0.03		0.56	0.14	
Control Delay (s/veh)	46.4	18.0		41.9	28.9		41.0	17.9		45.6	9.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	46.4	18.0		41.9	28.9		41.0	17.9		45.6	9.1	
LOS	D	B		D	C		D	B		D	A	
Approach Delay (s/veh)		21.7			29.1			31.9			24.7	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay (s/veh): 25.5		Intersection LOS: C	
Intersection Capacity Utilization 50.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 21: Smith Ranch Road Road & Bailey Road



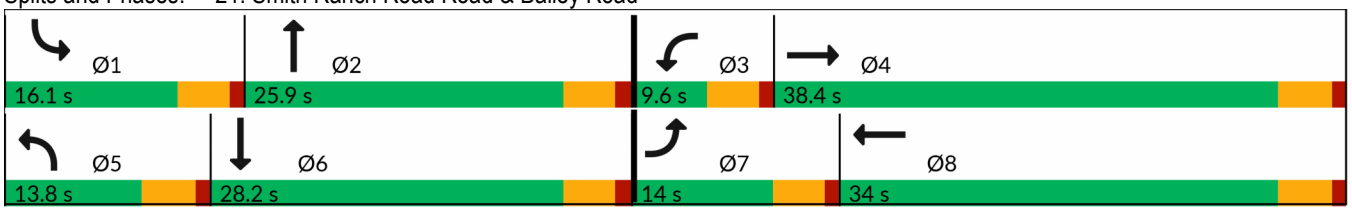


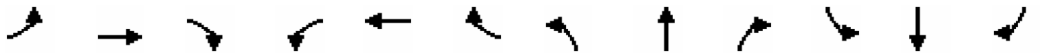
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	310	29	7	845	30	126	16	7	39	10	110
Future Volume (vph)	91	310	29	7	845	30	126	16	7	39	10	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	100		0	100		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.987			0.995			0.952			0.863	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3522	0	1770	3369	0	1770	3054	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3493	0	1770	3522	0	1770	3369	0	1770	3054	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			4			8			120	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		930			5111			1029			1098	
Travel Time (s)		21.1			116.2			23.4			25.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	337	32	8	918	33	137	17	8	42	11	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	369	0	8	951	0	137	25	0	42	131	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	14.0	38.4		9.6	34.0		13.8	25.9		16.1	28.2	
Total Split (%)	15.6%	42.7%		10.7%	37.8%		15.3%	28.8%		17.9%	31.3%	
Maximum Green (s)	9.5	33.9		5.1	29.5		9.3	21.4		11.6	23.7	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	8.6	35.8		5.2	27.2		9.0	30.3		7.6	24.1	
Actuated g/C Ratio	0.10	0.42		0.06	0.32		0.11	0.36		0.09	0.29	
v/c Ratio	0.55	0.25		0.07	0.84		0.72	0.02		0.27	0.14	
Control Delay (s/veh)	50.5	15.6		41.9	34.8		62.1	19.1		42.0	6.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	50.5	15.6		41.9	34.8		62.1	19.1		42.0	6.8	
LOS	D	B		D	C		E	B		D	A	
Approach Delay (s/veh)		23.0			34.8			55.5			15.3	
Approach LOS		C			C			E			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 84.5			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 31.7		Intersection LOS: C	
Intersection Capacity Utilization 54.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 21: Smith Ranch Road Road & Bailey Road



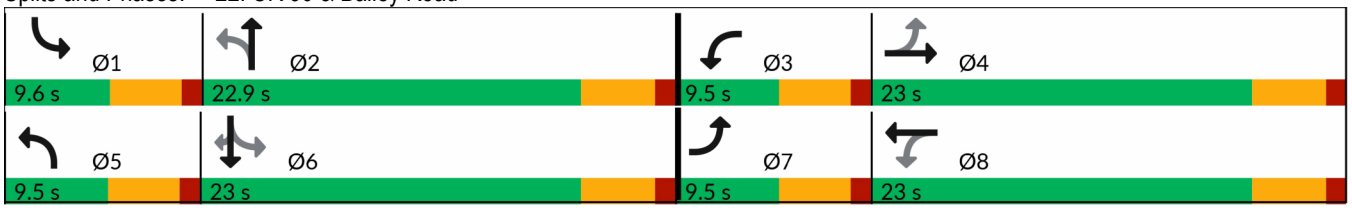


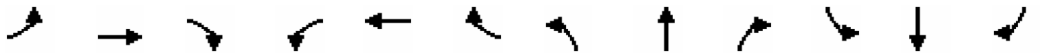
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	538	3	5	517	62	0	2	4	114	3	88
Future Volume (vph)	59	538	3	5	517	62	0	2	4	114	3	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	40		0	350		0	80		150	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.999			0.984			0.900			0.859	0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	3536	0	1770	3483	0	1863	3185	0	1770	2912	1441
Flt Permitted	0.254			0.365						0.612		
Satd. Flow (perm)	473	3536	0	680	3483	0	1863	3185	0	1140	2912	1441
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			20			341			434	434
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5111			6249			1160			437	
Travel Time (s)		116.2			142.0			26.4			9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	64	585	3	5	562	67	0	2	4	124	3	96
Shared Lane Traffic (%)												50%
Lane Group Flow (vph)	64	588	0	5	629	0	0	6	0	124	51	48
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	9.5	23.0		9.5	23.0		9.5	22.9		9.6	23.0	23.0
Total Split (%)	14.6%	35.4%		14.6%	35.4%		14.6%	35.2%		14.8%	35.4%	35.4%
Maximum Green (s)	5.0	18.5		5.0	18.5		5.0	18.4		5.1	18.5	18.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max		None	Max	Max
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	19.3	18.4		17.7	15.1			19.4		26.5	26.5	26.5
Actuated g/C Ratio	0.34	0.33		0.32	0.27			0.35		0.47	0.47	0.47
v/c Ratio	0.23	0.51		0.02	0.66			0.00		0.21	0.03	0.05
Control Delay (s/veh)	13.4	17.3		11.0	22.3			0.0		11.6	0.0	0.1
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Total Delay (s/veh)	13.4	17.3		11.0	22.3			0.0		11.6	0.0	0.1
LOS	B	B		B	C			A		B	A	A
Approach Delay (s/veh)		16.9			22.2						6.5	
Approach LOS		B			C						A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 56			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 17.5		Intersection LOS: B	
Intersection Capacity Utilization 44.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: CR 90 & Bailey Road



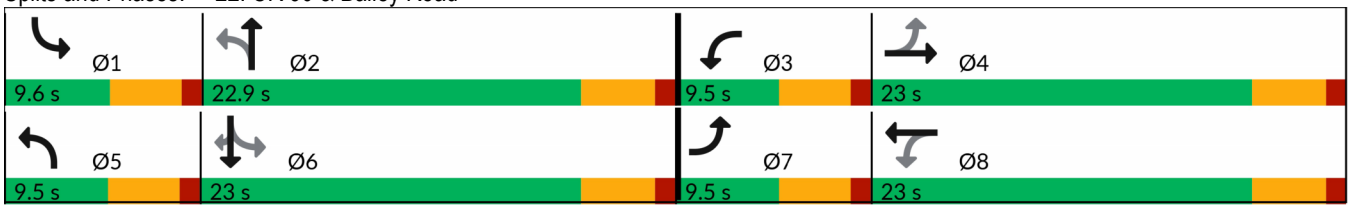


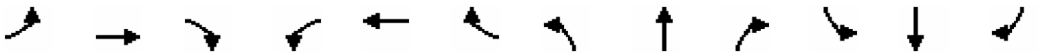
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	361	3	3	593	76	4	0	3	54	1	79
Future Volume (vph)	73	361	3	3	593	76	4	0	3	54	1	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	40		0	350		0	80		150	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Frt		0.999			0.983			0.850			0.853	0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3536	0	1770	3479	0	1770	3008	0	1770	2892	1441
Flt Permitted	0.204			0.519			0.725			0.696		
Satd. Flow (perm)	380	3536	0	967	3479	0	1350	3008	0	1296	2892	1441
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			21			455			413	413
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5111			6249			1160			437	
Travel Time (s)		116.2			142.0			26.4			9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	392	3	3	645	83	4	0	3	59	1	86
Shared Lane Traffic (%)												50%
Lane Group Flow (vph)	79	395	0	3	728	0	4	3	0	59	44	43
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	9.5	23.0		9.5	23.0		9.5	22.9		9.6	23.0	23.0
Total Split (%)	14.6%	35.4%		14.6%	35.4%		14.6%	35.2%		14.8%	35.4%	35.4%
Maximum Green (s)	5.0	18.5		5.0	18.5		5.0	18.4		5.1	18.5	18.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max		None	Max	Max
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	20.5	19.6		18.9	16.4		22.0	19.5		23.6	22.8	22.8
Actuated g/C Ratio	0.37	0.36		0.34	0.30		0.40	0.35		0.43	0.41	0.41
v/c Ratio	0.29	0.31		0.01	0.69		0.01	0.00		0.10	0.03	0.05
Control Delay (s/veh)	13.9	14.6		10.7	22.1		10.8	0.0		11.2	0.1	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	13.9	14.6		10.7	22.1		10.8	0.0		11.2	0.1	0.1
LOS	B	B		B	C		B	A		B	A	A
Approach Delay (s/veh)		14.5			22.1			6.1			4.6	
Approach LOS		B			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 55.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 17.4		Intersection LOS: B	
Intersection Capacity Utilization 43.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: CR 90 & Bailey Road



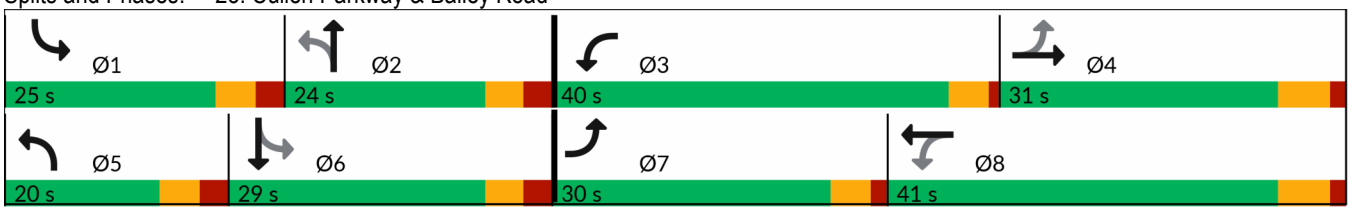


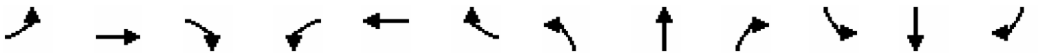
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	539	37	63	538	50	22	28	32	85	96	58
Future Volume (vph)	52	539	37	63	538	50	22	28	32	85	96	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.990			0.987			0.919			0.943	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3504	0	1770	3493	0	1770	3253	0	1770	3337	0
Flt Permitted	0.253			0.282			0.646			0.604		
Satd. Flow (perm)	471	3504	0	525	3493	0	1203	3253	0	1125	3337	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			8			35			63	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		6249			5290			1720			1280	
Travel Time (s)		142.0			120.2			39.1			29.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	586	40	68	585	54	24	30	35	92	104	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	626	0	68	639	0	24	65	0	92	167	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	30.0		40.0	40.0		20.0	24.0		25.0	25.0	
Total Split (s)	30.0	31.0		40.0	41.0		20.0	24.0		25.0	29.0	
Total Split (%)	25.0%	25.8%		33.3%	34.2%		16.7%	20.0%		20.8%	24.2%	
Maximum Green (s)	25.0	25.0		35.5	35.0		14.0	18.0		19.0	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.0	1.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		4.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	27.5	20.8		27.7	20.4		25.9	21.1		31.2	27.7	
Actuated g/C Ratio	0.37	0.28		0.37	0.27		0.35	0.28		0.42	0.37	
v/c Ratio	0.19	0.64		0.21	0.66		0.05	0.07		0.17	0.13	
Control Delay (s/veh)	14.7	27.7		14.7	28.5		16.0	15.3		16.2	14.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	14.7	27.7		14.7	28.5		16.0	15.3		16.2	14.3	
LOS	B	C		B	C		B	B		B	B	
Approach Delay (s/veh)		26.6			27.2			15.5			15.0	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 74.6			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 24.5		Intersection LOS: C	
Intersection Capacity Utilization 47.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 23: Cullen Parkway & Bailey Road



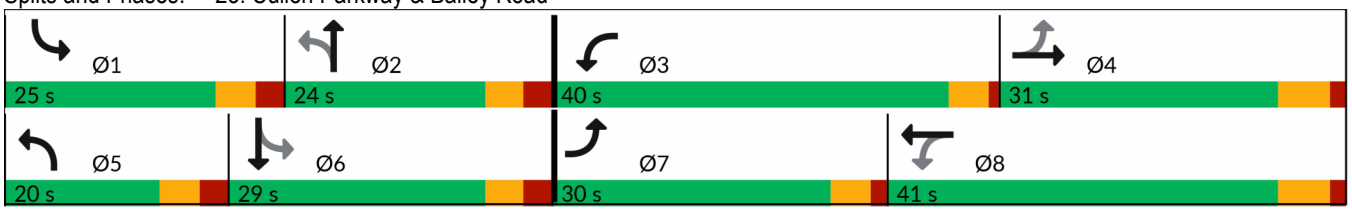


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	400	21	27	531	83	25	51	49	49	33	43
Future Volume (vph)	48	400	21	27	531	83	25	51	49	49	33	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.992			0.980			0.926			0.915	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3511	0	1770	3468	0	1770	3277	0	1770	3238	0
Flt Permitted	0.233			0.488			0.700			0.642		
Satd. Flow (perm)	434	3511	0	909	3468	0	1304	3277	0	1196	3238	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			15			53			47	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		6249			5290			1720			1280	
Travel Time (s)		142.0			120.2			39.1			29.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	435	23	29	577	90	27	55	53	53	36	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	458	0	29	667	0	27	108	0	53	83	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	30.0		40.0	40.0		20.0	24.0		25.0	25.0	
Total Split (s)	30.0	31.0		40.0	41.0		20.0	24.0		25.0	29.0	
Total Split (%)	25.0%	25.8%		33.3%	34.2%		16.7%	20.0%		20.8%	24.2%	
Maximum Green (s)	25.0	25.0		35.5	35.0		14.0	18.0		19.0	23.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.0	1.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		4.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	28.0	24.1		26.0	21.1		26.9	23.4		28.9	26.1	
Actuated g/C Ratio	0.39	0.34		0.37	0.30		0.38	0.33		0.41	0.37	
v/c Ratio	0.17	0.38		0.07	0.64		0.05	0.10		0.10	0.07	
Control Delay (s/veh)	14.0	19.8		13.0	26.0		16.2	14.9		16.0	12.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	14.0	19.8		13.0	26.0		16.2	14.9		16.0	12.7	
LOS	B	B		B	C		B	B		B	B	
Approach Delay (s/veh)		19.2			25.4			15.2			14.0	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 71.1			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay (s/veh): 21.3		Intersection LOS: C	
Intersection Capacity Utilization 44.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 23: Cullen Parkway & Bailey Road

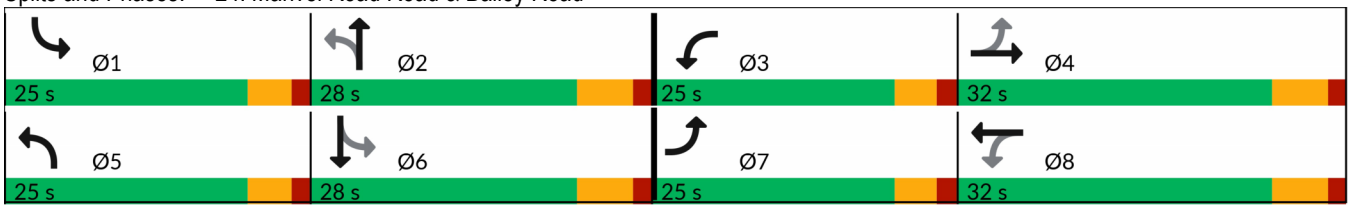


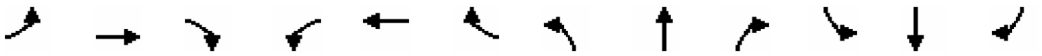
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	476	90	154	487	98	82	260	164	123	329	114
Future Volume (vph)	85	476	90	154	487	98	82	260	164	123	329	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	220		0	330		330	300		300
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.976			0.975			0.942			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3451	0	1770	3334	0	1770	3401	0
Flt Permitted	0.325			0.216			0.453			0.362		
Satd. Flow (perm)	605	3454	0	402	3451	0	844	3334	0	674	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			20			112			39	
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		5290			5252			1738			1472	
Travel Time (s)		80.2			79.6			21.5			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	517	98	167	529	107	89	283	178	134	358	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	92	615	0	167	636	0	89	461	0	134	482	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	32.0		25.0	32.0		25.0	28.0		25.0	28.0	
Total Split (%)	22.7%	29.1%		22.7%	29.1%		22.7%	25.5%		22.7%	25.5%	
Maximum Green (s)	20.0	26.0		20.0	26.0		20.0	22.0		20.0	22.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	29.5	20.2		34.8	25.0		31.5	22.2		35.3	26.2	
Actuated g/C Ratio	0.35	0.24		0.41	0.29		0.37	0.26		0.42	0.31	
v/c Ratio	0.28	0.73		0.50	0.62		0.22	0.48		0.33	0.45	
Control Delay (s/veh)	17.1	35.1		20.5	29.1		17.1	23.1		18.0	25.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	17.1	35.1		20.5	29.1		17.1	23.1		18.0	25.6	
LOS	B	D		C	C		B	C		B	C	
Approach Delay (s/veh)		32.7			27.3			22.1			24.0	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 84.8			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 26.9		Intersection LOS: C	
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 24: Manvel Road Road & Bailey Road



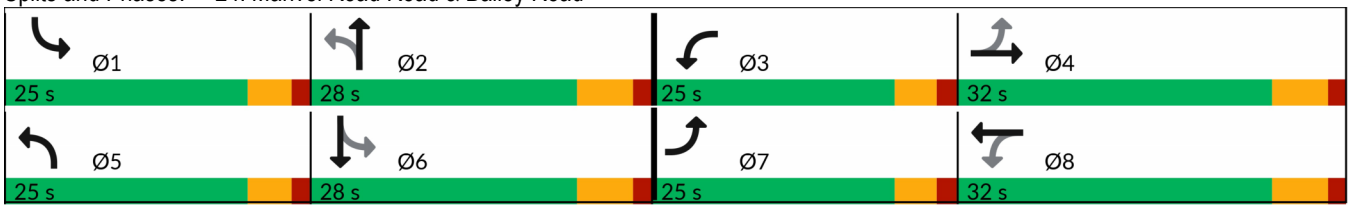


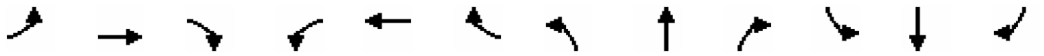
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	354	47	98	420	149	126	260	143	161	173	140
Future Volume (vph)	132	354	47	98	420	149	126	260	143	161	173	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	220		0	330		330	300		300
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.982			0.961			0.947			0.933	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3401	0	1770	3352	0	1770	3302	0
Flt Permitted	0.216			0.499			0.547			0.397		
Satd. Flow (perm)	402	3476	0	930	3401	0	1019	3352	0	740	3302	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			42			83			152	
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		5290			5252			1738			1472	
Travel Time (s)		80.2			79.6			21.5			18.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	143	385	51	107	457	162	137	283	155	175	188	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	143	436	0	107	619	0	137	438	0	175	340	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	32.0		25.0	32.0		25.0	28.0		25.0	28.0	
Total Split (%)	22.7%	29.1%		22.7%	29.1%		22.7%	25.5%		22.7%	25.5%	
Maximum Green (s)	20.0	26.0		20.0	26.0		20.0	22.0		20.0	22.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	35.0	25.0		29.9	20.3		33.1	22.3		35.5	23.5	
Actuated g/C Ratio	0.40	0.29		0.35	0.23		0.38	0.26		0.41	0.27	
v/c Ratio	0.43	0.43		0.26	0.75		0.29	0.47		0.40	0.34	
Control Delay (s/veh)	19.7	27.2		17.2	35.3		17.4	25.4		18.7	16.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	19.7	27.2		17.2	35.3		17.4	25.4		18.7	16.0	
LOS	B	C		B	D		B	C		B	B	
Approach Delay (s/veh)		25.3			32.6			23.5			16.9	
Approach LOS		C			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.5			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay (s/veh): 25.3		Intersection LOS: C	
Intersection Capacity Utilization 62.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 24: Manvel Road Road & Bailey Road





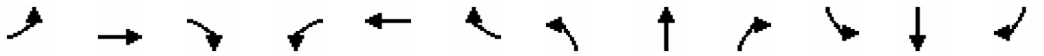
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	663	18	15	667	126	10	14	17	105	46	67
Future Volume (vph)	52	663	18	15	667	126	10	14	17	105	46	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.996			0.976			0.918			0.911	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3525	0	1770	3454	0	1770	3249	0	1770	3224	0
Flt Permitted	0.161			0.304			0.674			0.604		
Satd. Flow (perm)	300	3525	0	566	3454	0	1255	3249	0	1125	3224	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			19			18			73	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5252			5253			1557			1503	
Travel Time (s)		119.4			119.4			35.4			34.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	721	20	16	725	137	11	15	18	114	50	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	741	0	16	862	0	11	33	0	114	123	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	45.0		25.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	20.8%	37.5%		20.8%	37.5%		20.8%	20.8%		20.8%	20.8%	
Maximum Green (s)	20.0	39.0		20.0	39.0		20.0	19.0		20.0	19.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	38.3	34.2		34.1	28.6		25.8	20.3		32.5	29.6	
Actuated g/C Ratio	0.46	0.42		0.41	0.35		0.31	0.25		0.39	0.36	
v/c Ratio	0.21	0.51		0.05	0.71		0.03	0.04		0.22	0.10	
Control Delay (s/veh)	13.6	20.3		12.1	27.8		19.6	19.8		20.3	11.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	13.6	20.3		12.1	27.8		19.6	19.8		20.3	11.7	
LOS	B	C		B	C		B	B		C	B	
Approach Delay (s/veh)		19.8			27.5			19.8			15.8	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 82.4			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay (s/veh): 22.8		Intersection LOS: C	
Intersection Capacity Utilization 53.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Harkey Road & Bailey Road





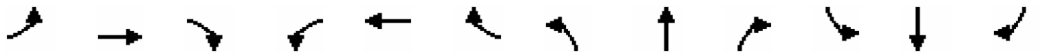
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	568	8	8	532	122	28	40	17	130	17	90
Future Volume (vph)	84	568	8	8	532	122	28	40	17	130	17	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.998			0.972			0.956			0.873	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3532	0	1770	3440	0	1770	3383	0	1770	3090	0
Flt Permitted	0.198			0.414			0.679			0.583		
Satd. Flow (perm)	369	3532	0	771	3440	0	1265	3383	0	1086	3090	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			25			18			98	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5252			5253			1557			1503	
Travel Time (s)		119.4			119.4			35.4			34.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	91	617	9	9	578	133	30	43	18	141	18	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	91	626	0	9	711	0	30	61	0	141	116	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	45.0		25.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	20.8%	37.5%		20.8%	37.5%		20.8%	20.8%		20.8%	20.8%	
Maximum Green (s)	20.0	39.0		20.0	39.0		20.0	19.0		20.0	19.0	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	35.9	33.0		29.1	23.7		27.4	19.7		35.8	28.5	
Actuated g/C Ratio	0.44	0.40		0.35	0.29		0.33	0.24		0.43	0.35	
v/c Ratio	0.29	0.44		0.03	0.71		0.07	0.07		0.25	0.10	
Control Delay (s/veh)	15.3	19.1		13.0	30.2		18.1	23.3		18.7	8.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.3	19.1		13.0	30.2		18.1	23.3		18.7	8.7	
LOS	B	B		B	C		B	C		B	A	
Approach Delay (s/veh)		18.6			30.0			21.6			14.2	
Approach LOS		B			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 82.4			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay (s/veh): 22.7		Intersection LOS: C	
Intersection Capacity Utilization 51.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 25: Harkey Road & Bailey Road



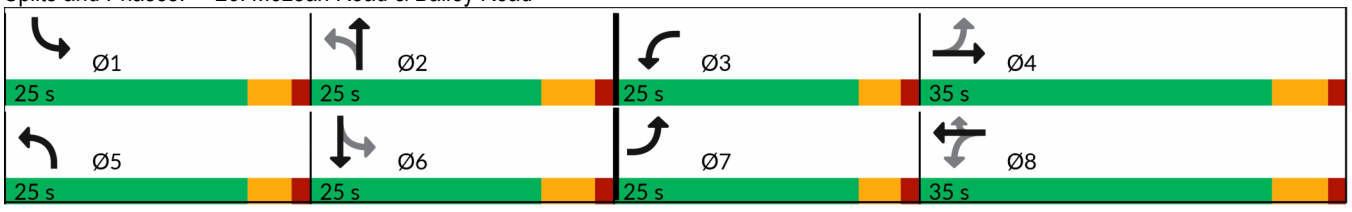


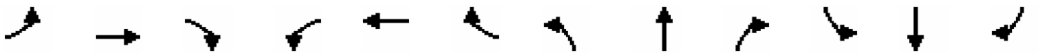
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	668	23	21	663	80	7	13	10	57	24	104
Future Volume (vph)	96	668	23	21	663	80	7	13	10	57	24	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	330		0	330		330	150		0	150		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.995			0.998	0.850		0.934			0.878	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3522	0	1770	3383	1441	1770	3306	0	1770	3107	0
Flt Permitted	0.183			0.305			0.664			0.617		
Satd. Flow (perm)	341	3522	0	568	3383	1441	1237	3306	0	1149	3107	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			1	129		11			113	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5253			2652			1736			277	
Travel Time (s)		119.4			60.3			39.5			6.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	104	726	25	23	721	87	8	14	11	62	26	113
Shared Lane Traffic (%)						10%						
Lane Group Flow (vph)	104	751	0	23	730	78	8	25	0	62	139	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	0	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (s)	25.0	35.0		25.0	35.0	35.0	25.0	25.0		25.0	25.0	
Total Split (%)	22.7%	31.8%		22.7%	31.8%	31.8%	22.7%	22.7%		22.7%	22.7%	
Maximum Green (s)	20.0	29.0		20.0	29.0	29.0	20.0	19.0		20.0	19.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		11.0			11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	35.1	30.5		29.6	24.0	24.0	25.5	20.2		30.3	27.6	
Actuated g/C Ratio	0.46	0.40		0.38	0.31	0.31	0.33	0.26		0.39	0.36	
v/c Ratio	0.32	0.54		0.07	0.69	0.15	0.02	0.03		0.12	0.12	
Control Delay (s/veh)	14.4	20.4		12.0	28.5	1.7	17.6	19.7		17.8	7.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	14.4	20.4		12.0	28.5	1.7	17.6	19.7		17.8	7.6	
LOS	B	C		B	C	A	B	B		B	A	
Approach Delay (s/veh)		19.7			25.5			19.2			10.8	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 76.9			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 21.3		Intersection LOS: C	
Intersection Capacity Utilization 51.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: McLean Road & Bailey Road



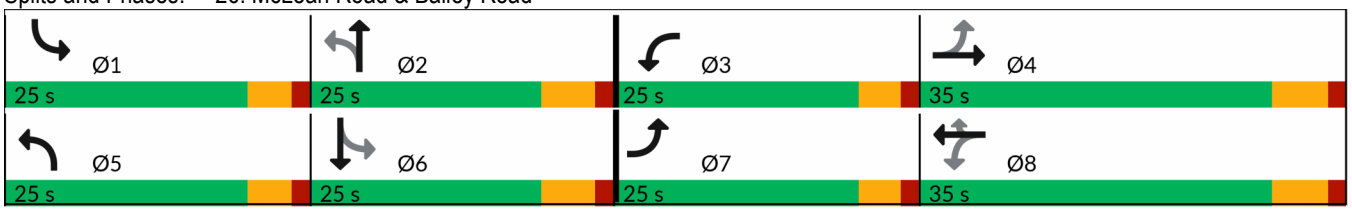


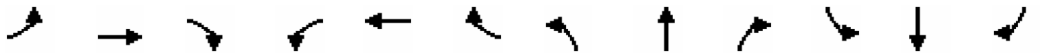
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	669	12	19	553	97	11	3	21	87	10	125
Future Volume (vph)	75	669	12	19	553	97	11	3	21	87	10	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	330		0	330		330	150		0	150		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.997			0.997	0.850		0.867			0.861	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3529	0	1770	3380	1441	1770	3068	0	1770	3047	0
Flt Permitted	0.239			0.295			0.659			0.607		
Satd. Flow (perm)	445	3529	0	550	3380	1441	1228	3068	0	1131	3047	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			2	129		538			136	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5253			2652			1736			277	
Travel Time (s)		119.4			60.3			39.5			6.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	727	13	21	601	105	12	3	23	95	11	136
Shared Lane Traffic (%)						10%						
Lane Group Flow (vph)	82	740	0	21	612	94	12	26	0	95	147	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	0	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (s)	25.0	35.0		25.0	35.0	35.0	25.0	25.0		25.0	25.0	
Total Split (%)	22.7%	31.8%		22.7%	31.8%	31.8%	22.7%	22.7%		22.7%	22.7%	
Maximum Green (s)	20.0	29.0		20.0	29.0	29.0	20.0	19.0		20.0	19.0	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Don't Walk (s)		11.0			11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	31.7	27.4		27.0	21.4	21.4	25.6	20.1		31.3	28.4	
Actuated g/C Ratio	0.43	0.37		0.36	0.29	0.29	0.34	0.27		0.42	0.38	
v/c Ratio	0.25	0.57		0.07	0.63	0.19	0.03	0.02		0.17	0.12	
Control Delay (s/veh)	14.4	22.0		12.9	27.8	2.9	16.2	0.0		16.4	5.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	14.4	22.0		12.9	27.8	2.9	16.2	0.0		16.4	5.7	
LOS	B	C		B	C	A	B	A		B	A	
Approach Delay (s/veh)		21.2			24.1			5.1			9.9	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 74.4			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 20.6		Intersection LOS: C	
Intersection Capacity Utilization 49.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: McLean Road & Bailey Road



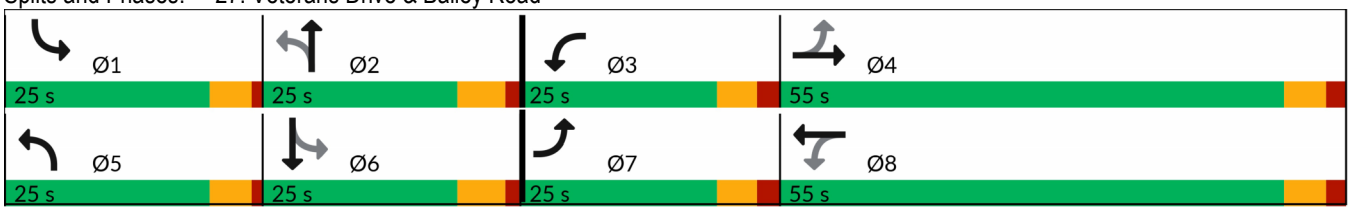


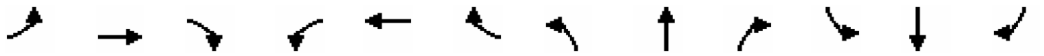
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	466	83	163	742	96	73	76	102	38	162	86
Future Volume (vph)	49	466	83	163	742	96	73	76	102	38	162	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		180	150		150	180		180	250		180
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.977			0.983			0.914			0.948	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3458	0	1770	3479	0	1770	3235	0	1770	3355	0
Flt Permitted	0.200			0.271			0.517			0.630		
Satd. Flow (perm)	373	3458	0	505	3479	0	963	3235	0	1174	3355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			12			111			62	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2652			5774			5367			662	
Travel Time (s)		60.3			131.2			122.0			15.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	507	90	177	807	104	79	83	111	41	176	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	597	0	177	911	0	79	194	0	41	269	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	12.0		3.0	12.0		3.0	10.0		3.0	12.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	55.0		25.0	55.0		25.0	25.0		25.0	25.0	
Total Split (%)	19.2%	42.3%		19.2%	42.3%		19.2%	19.2%		19.2%	19.2%	
Maximum Green (s)	19.0	49.0		19.0	49.0		20.0	19.0		20.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	33.0	25.6		40.4	32.1		30.1	23.7		26.5	19.9	
Actuated g/C Ratio	0.39	0.30		0.47	0.38		0.35	0.28		0.31	0.23	
v/c Ratio	0.20	0.57		0.45	0.69		0.19	0.20		0.10	0.32	
Control Delay (s/veh)	13.9	26.9		16.3	27.0		21.6	14.6		21.1	25.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	13.9	26.9		16.3	27.0		21.6	14.6		21.1	25.6	
LOS	B	C		B	C		C	B		C	C	
Approach Delay (s/veh)		25.9			25.3			16.7			25.0	
Approach LOS		C			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 85.5			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 24.4		Intersection LOS: C	
Intersection Capacity Utilization 60.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 27: Veterans Drive & Bailey Road



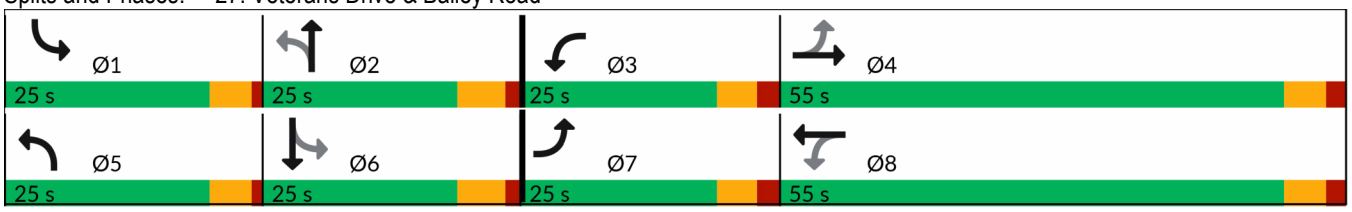


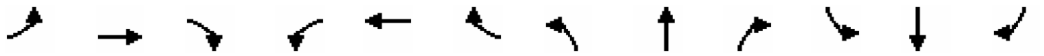
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	526	26	47	387	52	66	140	123	78	55	179
Future Volume (vph)	60	526	26	47	387	52	66	140	123	78	55	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	180		180	150		150	180		180	250		180
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.993			0.982			0.930			0.885	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3514	0	1770	3476	0	1770	3291	0	1770	3132	0
Flt Permitted	0.368			0.349			0.594			0.571		
Satd. Flow (perm)	685	3514	0	650	3476	0	1106	3291	0	1064	3132	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			13			134			195	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2652			5774			5367			662	
Travel Time (s)		60.3			131.2			122.0			15.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	572	28	51	421	57	72	152	134	85	60	195
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	600	0	51	478	0	72	286	0	85	255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	12.0		3.0	12.0		3.0	10.0		3.0	12.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	55.0		25.0	55.0		25.0	25.0		25.0	25.0	
Total Split (%)	19.2%	42.3%		19.2%	42.3%		19.2%	19.2%		19.2%	19.2%	
Maximum Green (s)	19.0	49.0		19.0	49.0		20.0	19.0		20.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	25.4	21.0		23.1	17.9		27.2	20.2		27.7	20.4	
Actuated g/C Ratio	0.36	0.30		0.33	0.25		0.38	0.28		0.39	0.29	
v/c Ratio	0.18	0.57		0.16	0.54		0.14	0.28		0.17	0.25	
Control Delay (s/veh)	14.6	25.2		14.6	26.3		15.1	14.4		15.2	8.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	14.6	25.2		14.6	26.3		15.1	14.4		15.2	8.3	
LOS	B	C		B	C		B	B		B	A	
Approach Delay (s/veh)		24.2			25.2			14.5			10.0	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 70.9			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay (s/veh): 20.1		Intersection LOS: C	
Intersection Capacity Utilization 51.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 27: Veterans Drive & Bailey Road



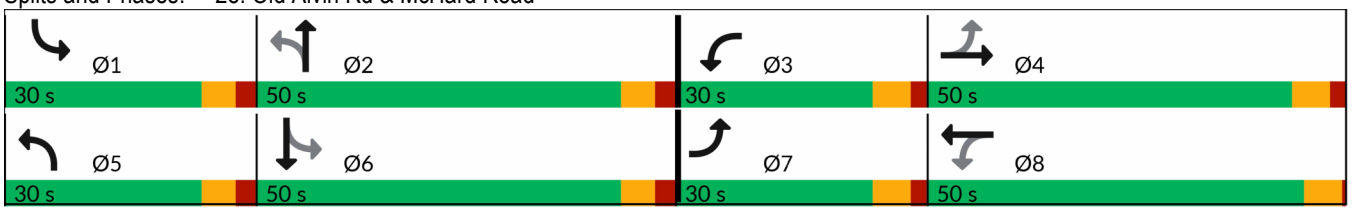


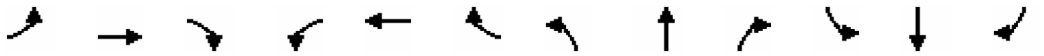
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	467	94	139	472	107	92	71	70	59	62	37
Future Volume (vph)	44	467	94	139	472	107	92	71	70	59	62	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	400		150	220		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.975			0.972			0.925			0.944	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3451	0	1770	3440	0	1770	3274	0	1770	3341	0
Flt Permitted	0.300			0.197			0.637			0.655		
Satd. Flow (perm)	559	3451	0	367	3440	0	1187	3274	0	1220	3341	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			17			76			40	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2786			1445			1102			1362	
Travel Time (s)		63.3			32.8			25.0			31.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	508	102	151	513	116	100	77	76	64	67	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	610	0	151	629	0	100	153	0	64	107	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	20.0	35.0		20.0	35.0		20.0	22.5		20.0	22.5	
Total Split (s)	30.0	50.0		30.0	50.0		30.0	50.0		30.0	50.0	
Total Split (%)	18.8%	31.3%		18.8%	31.3%		18.8%	31.3%		18.8%	31.3%	
Maximum Green (s)	23.5	43.5		23.5	45.0		23.5	43.5		23.5	43.5	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	0.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	5.0		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		7.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	33.3	25.7		43.1	34.8		52.1	44.4		47.6	39.6	
Actuated g/C Ratio	0.29	0.23		0.38	0.31		0.46	0.39		0.42	0.35	
v/c Ratio	0.20	0.77		0.53	0.59		0.17	0.12		0.12	0.09	
Control Delay (s/veh)	24.5	47.6		30.1	36.3		18.2	14.2		18.2	18.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.5	47.6		30.1	36.3		18.2	14.2		18.2	18.3	
LOS	C	D		C	D		B	B		B	B	
Approach Delay (s/veh)		45.9			35.1			15.8			18.3	
Approach LOS		D			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 113.3			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 34.7		Intersection LOS: C	
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 28: Old Alvin Rd & McHard Road



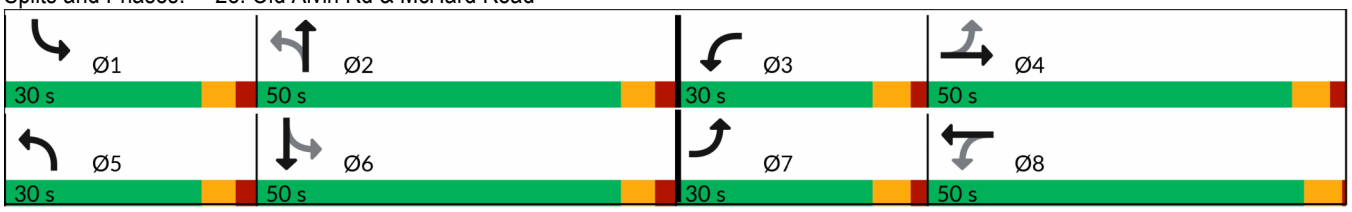


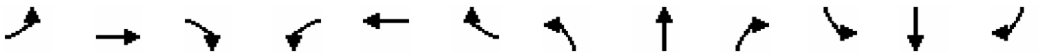
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	317	29	167	426	98	108	55	225	128	51	48
Future Volume (vph)	34	317	29	167	426	98	108	55	225	128	51	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	400		150	220		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.987			0.972			0.880			0.927	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3440	0	1770	3115	0	1770	3281	0
Flt Permitted	0.389			0.315			0.684			0.553		
Satd. Flow (perm)	725	3493	0	587	3440	0	1274	3115	0	1030	3281	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			17			245			52	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2786			1445			1102			1362	
Travel Time (s)		63.3			32.8			25.0			31.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	345	32	182	463	107	117	60	245	139	55	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	377	0	182	570	0	117	305	0	139	107	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	20.0	35.0		20.0	35.0		20.0	22.5		20.0	22.5	
Total Split (s)	30.0	50.0		30.0	50.0		30.0	50.0		30.0	50.0	
Total Split (%)	18.8%	31.3%		18.8%	31.3%		18.8%	31.3%		18.8%	31.3%	
Maximum Green (s)	23.5	43.5		23.5	45.0		23.5	43.5		23.5	43.5	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	0.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	5.0		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		7.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	25.2	18.1		38.5	31.7		53.4	43.8		54.6	44.4	
Actuated g/C Ratio	0.22	0.16		0.34	0.28		0.48	0.39		0.49	0.40	
v/c Ratio	0.16	0.66		0.52	0.58		0.18	0.22		0.24	0.08	
Control Delay (s/veh)	27.1	50.2		32.6	37.5		14.9	6.5		15.4	13.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	27.1	50.2		32.6	37.5		14.9	6.5		15.4	13.4	
LOS	C	D		C	D		B	A		B	B	
Approach Delay (s/veh)		48.1			36.3			8.8			14.5	
Approach LOS		D			D			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 112.1			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 29.7		Intersection LOS: C	
Intersection Capacity Utilization 59.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 28: Old Alvin Rd & McHard Road



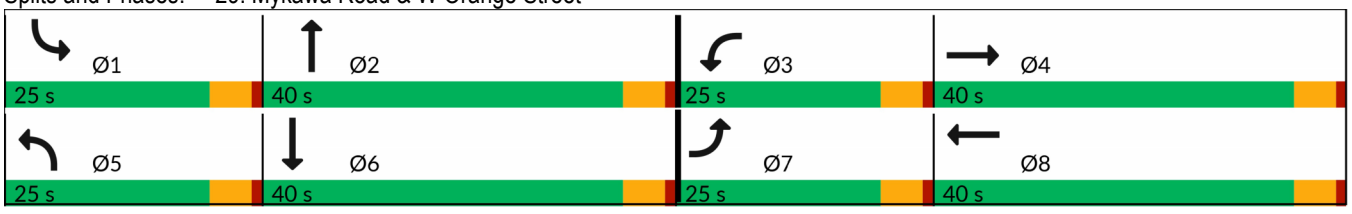


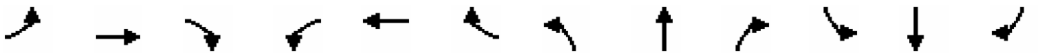
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	108	7	27	102	38	8	150	25	75	479	63
Future Volume (vph)	28	108	7	27	102	38	8	150	25	75	479	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.990			0.960			0.979			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1844	0	1770	1788	0	1770	1824	0	1770	3479	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1844	0	1770	1788	0	1770	1824	0	1770	3479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			14			6			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		647			2722			1670			4252	
Travel Time (s)		14.7			61.9			38.0			96.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	117	8	29	111	41	9	163	27	82	521	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	125	0	29	152	0	9	190	0	82	589	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (%)	19.2%	30.8%		19.2%	30.8%		19.2%	30.8%		19.2%	30.8%	
Maximum Green (s)	20.0	35.0		20.0	35.0		20.0	35.0		20.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	7.0	12.6		7.0	12.5		6.1	37.2		9.2	46.8	
Actuated g/C Ratio	0.09	0.17		0.09	0.16		0.08	0.49		0.12	0.62	
v/c Ratio	0.18	0.41		0.18	0.50		0.06	0.21		0.38	0.27	
Control Delay (s/veh)	39.1	34.7		39.1	34.6		39.4	15.6		39.3	9.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	39.1	34.7		39.1	34.6		39.4	15.6		39.3	9.5	
LOS	D	C		D	C		D	B		D	A	
Approach Delay (s/veh)		35.5			35.3			16.7			13.1	
Approach LOS		D			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 76			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay (s/veh): 19.9		Intersection LOS: B	
Intersection Capacity Utilization 48.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 29: Mykawa Road & W Orange Street



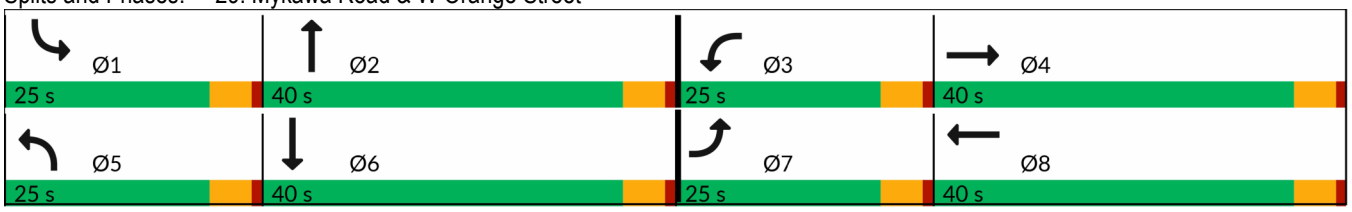


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	165	8	9	80	105	7	317	11	35	152	69
Future Volume (vph)	111	165	8	9	80	105	7	317	11	35	152	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.993			0.915			0.995			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1850	0	1770	1704	0	1770	1853	0	1770	3373	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1850	0	1770	1704	0	1770	1853	0	1770	3373	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			50			1			56	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		647			2722			1670			4252	
Travel Time (s)		14.7			61.9			38.0			96.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	179	9	10	87	114	8	345	12	38	165	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	188	0	10	201	0	8	357	0	38	240	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (%)	19.2%	30.8%		19.2%	30.8%		19.2%	30.8%		19.2%	30.8%	
Maximum Green (s)	20.0	35.0		20.0	35.0		20.0	35.0		20.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	11.3	28.3		6.2	13.8		6.1	36.0		7.5	41.3	
Actuated g/C Ratio	0.13	0.34		0.07	0.16		0.07	0.43		0.09	0.49	
v/c Ratio	0.51	0.30		0.08	0.62		0.06	0.45		0.24	0.14	
Control Delay (s/veh)	44.0	23.8		43.8	34.8		43.7	22.6		43.7	11.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	44.0	23.8		43.8	34.8		43.7	22.6		43.7	11.0	
LOS	D	C		D	C		D	C		D	B	
Approach Delay (s/veh)		31.7			35.2			23.1			15.5	
Approach LOS		C			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 83.8			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 25.8		Intersection LOS: C	
Intersection Capacity Utilization 55.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 29: Mykawa Road & W Orange Street

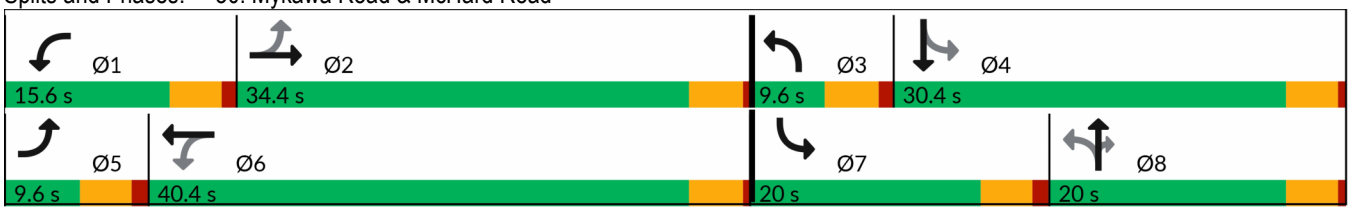


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	433	57	134	674	119	39	177	125	214	364	83
Future Volume (vph)	49	433	57	134	674	119	39	177	125	214	364	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		150	150		0	180		40
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.983			0.978				0.850		0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3461	0	1770	1863	1583	1770	3440	0
Flt Permitted	0.254			0.316			0.475			0.379		
Satd. Flow (perm)	473	3479	0	589	3461	0	885	1863	1583	706	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			27				230		31	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1946			1310			4252			883	
Travel Time (s)		44.2			29.8			72.5			15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	471	62	146	733	129	42	192	136	233	396	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	533	0	146	862	0	42	192	136	233	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	0	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	0	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	0	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0	4.0	5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0	20.0	9.5	20.0	
Total Split (s)	9.6	34.4		15.6	40.4		9.6	20.0	20.0	20.0	30.4	
Total Split (%)	10.7%	38.2%		17.3%	44.9%		10.7%	22.2%	22.2%	22.2%	33.8%	
Maximum Green (s)	5.1	30.4		11.1	36.4		5.1	16.0	16.0	15.5	26.4	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5	0.5	1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0	4.0	4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max		None	None		None	Max	Max	None	None	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Don't Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	35.1	30.5		43.5	38.4		20.6	16.0	16.0	33.9	28.8	
Actuated g/C Ratio	0.41	0.35		0.50	0.44		0.24	0.19	0.19	0.39	0.33	
v/c Ratio	0.20	0.43		0.35	0.55		0.16	0.56	0.28	0.52	0.42	
Control Delay (s/veh)	13.8	22.5		14.4	19.9		19.5	39.8	1.5	23.3	23.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	13.8	22.5		14.4	19.9		19.5	39.8	1.5	23.3	23.3	
LOS	B	C		B	B		B	D	A	C	C	
Approach Delay (s/veh)		21.7			19.1			23.4			23.3	
Approach LOS		C			B			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 86.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 21.4		Intersection LOS: C	
Intersection Capacity Utilization 61.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 30: Mykawa Road & McHard Road

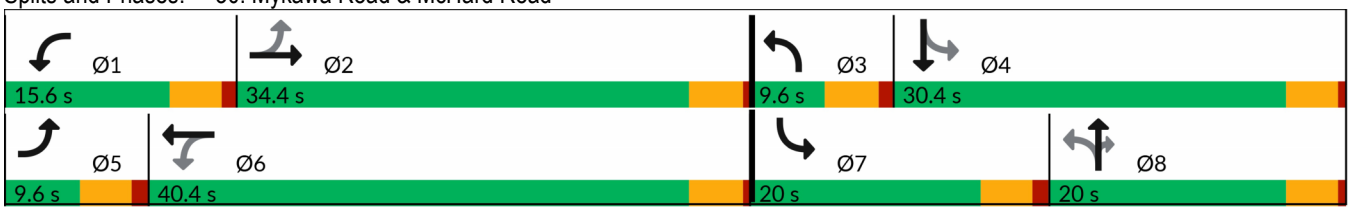


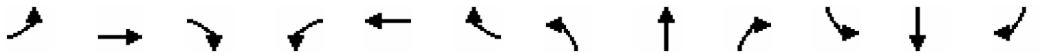
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	538	24	137	385	160	29	343	110	185	213	21
Future Volume (vph)	70	538	24	137	385	160	29	343	110	185	213	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		150	150		0	180		40
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.994			0.956				0.850		0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	1770	3383	0	1770	1863	1583	1770	3490	0
Flt Permitted	0.402			0.269			0.594			0.178		
Satd. Flow (perm)	749	3518	0	501	3383	0	1106	1863	1583	332	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			85				230		12	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1946			1310			4252			883	
Travel Time (s)		44.2			29.8			72.5			15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	585	26	149	418	174	32	373	120	201	232	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	611	0	149	592	0	32	373	120	201	255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	0	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	0	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	0	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0	4.0	5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0	20.0	9.5	20.0	
Total Split (s)	9.6	34.4		15.6	40.4		9.6	20.0	20.0	20.0	30.4	
Total Split (%)	10.7%	38.2%		17.3%	44.9%		10.7%	22.2%	22.2%	22.2%	33.8%	
Maximum Green (s)	5.1	30.4		11.1	36.4		5.1	16.0	16.0	15.5	26.4	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5	0.5	1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0	4.0	4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Max		None	None		None	Max	Max	None	None	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Don't Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	35.1	30.5		43.1	36.5		20.6	16.0	16.0	33.3	28.2	
Actuated g/C Ratio	0.41	0.36		0.50	0.43		0.24	0.19	0.19	0.39	0.33	
v/c Ratio	0.21	0.49		0.39	0.40		0.10	1.07	0.25	0.57	0.22	
Control Delay (s/veh)	13.5	23.6		14.9	16.2		18.8	105.3	1.2	25.4	21.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	13.5	23.6		14.9	16.2		18.8	105.3	1.2	25.4	21.8	
LOS	B	C		B	B		B	F	A	C	C	
Approach Delay (s/veh)		22.5			16.0			76.2			23.4	
Approach LOS		C			B			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 85.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay (s/veh): 32.4		Intersection LOS: C	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 30: Mykawa Road & McHard Road



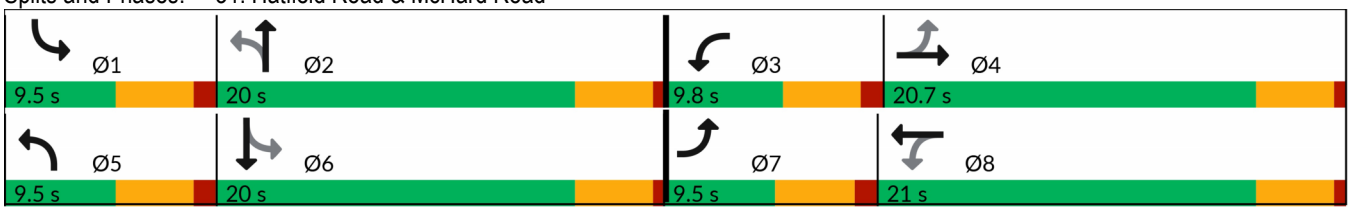


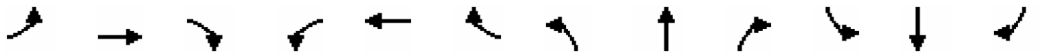
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	445	46	129	605	46	34	25	70	30	18	14
Future Volume (vph)	7	445	46	129	605	46	34	25	70	30	18	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		0	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.986			0.989			0.889			0.936	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3490	0	1770	3500	0	1770	3146	0	1770	3313	0
Flt Permitted	0.328			0.298			0.733			0.687		
Satd. Flow (perm)	611	3490	0	555	3500	0	1365	3146	0	1280	3313	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			13			76			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2112			2249			716			526	
Travel Time (s)		48.0			51.1			16.3			12.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	484	50	140	658	50	37	27	76	33	20	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	534	0	140	708	0	37	103	0	33	35	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.7		9.8	21.0		9.5	20.0		9.5	20.0	
Total Split (%)	15.8%	34.5%		16.3%	35.0%		15.8%	33.3%		15.8%	33.3%	
Maximum Green (s)	5.0	16.7		5.3	17.0		5.0	16.0		5.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	16.3	13.0		19.2	18.9		17.9	16.8		17.9	16.8	
Actuated g/C Ratio	0.33	0.27		0.39	0.39		0.37	0.34		0.37	0.34	
v/c Ratio	0.02	0.56		0.39	0.52		0.07	0.09		0.06	0.03	
Control Delay (s/veh)	9.7	18.6		13.2	14.0		10.9	7.1		10.9	11.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.7	18.6		13.2	14.0		10.9	7.1		10.9	11.4	
LOS	A	B		B	B		B	A		B	B	
Approach Delay (s/veh)		18.4			13.9			8.1			11.2	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 48.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 14.8		Intersection LOS: B	
Intersection Capacity Utilization 41.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 31: Hatfield Road & McHard Road



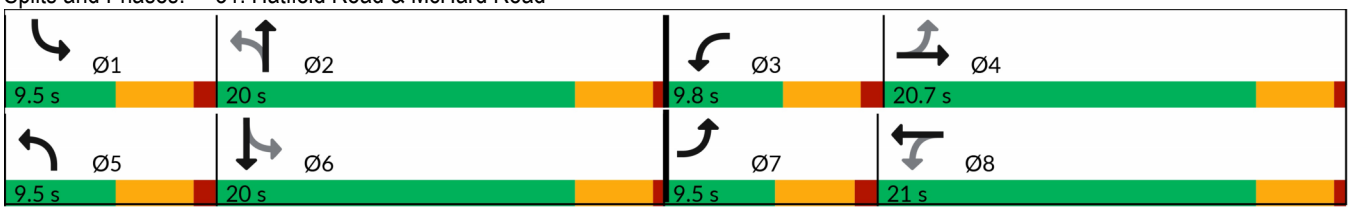


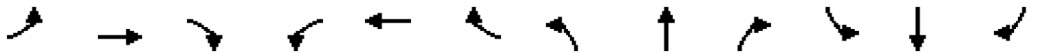
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	438	38	68	329	30	46	28	104	66	43	10
Future Volume (vph)	4	438	38	68	329	30	46	28	104	66	43	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		0	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.988			0.987			0.881			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3493	0	1770	3118	0	1770	3440	0
Flt Permitted	0.521			0.321			0.717			0.661		
Satd. Flow (perm)	970	3497	0	598	3493	0	1336	3118	0	1231	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			16			113			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2112			2249			716			526	
Travel Time (s)		48.0			51.1			16.3			12.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	476	41	74	358	33	50	30	113	72	47	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	517	0	74	391	0	50	143	0	72	58	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.7		9.8	21.0		9.5	20.0		9.5	20.0	
Total Split (%)	15.8%	34.5%		16.3%	35.0%		15.8%	33.3%		15.8%	33.3%	
Maximum Green (s)	5.0	16.7		5.3	17.0		5.0	16.0		5.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	14.6	12.6		16.3	15.9		19.4	17.4		19.4	17.4	
Actuated g/C Ratio	0.30	0.26		0.34	0.33		0.40	0.36		0.40	0.36	
v/c Ratio	0.01	0.56		0.22	0.34		0.09	0.12		0.13	0.05	
Control Delay (s/veh)	10.0	18.8		11.9	13.2		10.6	6.5		10.8	13.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.0	18.8		11.9	13.2		10.6	6.5		10.8	13.6	
LOS	A	B		B	B		B	A		B	B	
Approach Delay (s/veh)		18.8			13.0			7.5			12.0	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 48.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 14.4		Intersection LOS: B	
Intersection Capacity Utilization 39.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 31: Hatfield Road & McHard Road



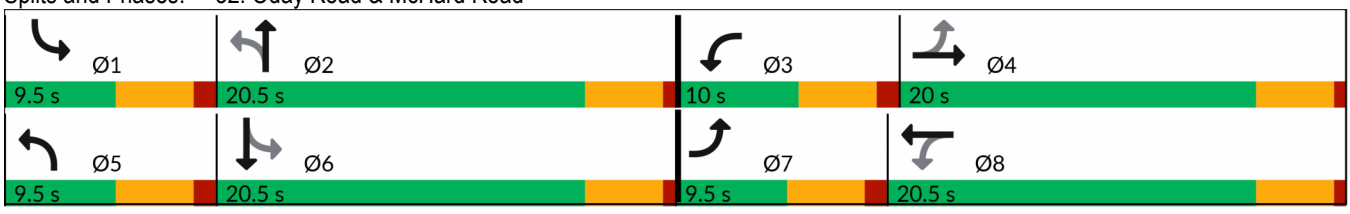


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	415	86	130	483	27	37	32	71	21	33	21
Future Volume (vph)	24	415	86	130	483	27	37	32	71	21	33	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.974			0.992			0.897			0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3447	0	1770	3511	0	1770	3175	0	1770	3334	0
Flt Permitted	0.445			0.286			0.679			0.681		
Satd. Flow (perm)	829	3447	0	533	3511	0	1265	3175	0	1269	3334	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			9			77			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2019			2112			892			740	
Travel Time (s)		45.9			48.0			20.3			16.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	451	93	141	525	29	40	35	77	23	36	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	544	0	141	554	0	40	112	0	23	59	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		10.0	20.5		9.5	20.5		9.5	20.5	
Total Split (%)	15.8%	33.3%		16.7%	34.2%		15.8%	34.2%		15.8%	34.2%	
Maximum Green (s)	5.0	16.0		5.5	16.5		5.0	16.5		5.0	16.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	15.7	12.5		18.9	18.5		17.4	17.2		16.6	15.4	
Actuated g/C Ratio	0.33	0.27		0.40	0.39		0.37	0.37		0.35	0.33	
v/c Ratio	0.07	0.58		0.39	0.40		0.08	0.09		0.05	0.05	
Control Delay (s/veh)	9.0	17.4		12.2	12.1		11.3	6.7		11.1	11.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.0	17.4		12.2	12.1		11.3	6.7		11.1	11.4	
LOS	A	B		B	B		B	A		B	B	
Approach Delay (s/veh)		17.0			12.1			7.9			11.3	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 47			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay (s/veh): 13.5		Intersection LOS: B	
Intersection Capacity Utilization 40.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 32: Oday Road & McHard Road

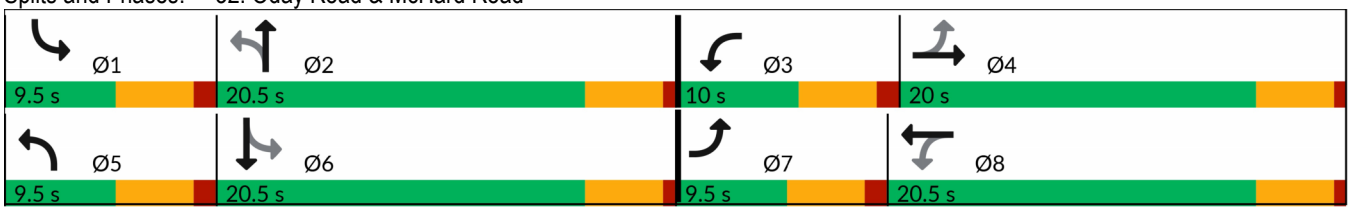


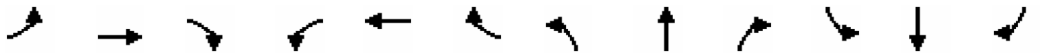
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	317	27	38	312	17	107	25	113	45	78	87
Future Volume (vph)	10	317	27	38	312	17	107	25	113	45	78	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.988			0.992			0.877			0.921	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3511	0	1770	3104	0	1770	3260	0
Flt Permitted	0.538			0.461			0.595			0.657		
Satd. Flow (perm)	1002	3497	0	859	3511	0	1108	3104	0	1224	3260	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			9			123			95	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2019			2112			892			740	
Travel Time (s)		45.9			48.0			20.3			16.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	345	29	41	339	18	116	27	123	49	85	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	374	0	41	357	0	116	150	0	49	180	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		10.0	20.5		9.5	20.5		9.5	20.5	
Total Split (%)	15.8%	33.3%		16.7%	34.2%		15.8%	34.2%		15.8%	34.2%	
Maximum Green (s)	5.0	16.0		5.5	16.5		5.0	16.5		5.0	16.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	11.3	10.4		12.2	12.0		18.8	17.8		17.6	15.5	
Actuated g/C Ratio	0.27	0.24		0.29	0.28		0.44	0.42		0.41	0.36	
v/c Ratio	0.03	0.43		0.11	0.36		0.20	0.11		0.09	0.14	
Control Delay (s/veh)	10.6	16.4		11.1	13.9		9.5	5.3		9.0	8.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.6	16.4		11.1	13.9		9.5	5.3		9.0	8.0	
LOS	B	B		B	B		A	A		A	A	
Approach Delay (s/veh)		16.2			13.6			7.1			8.2	
Approach LOS		B			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 42.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay (s/veh): 12.1		Intersection LOS: B	
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 32: Oday Road & McHard Road



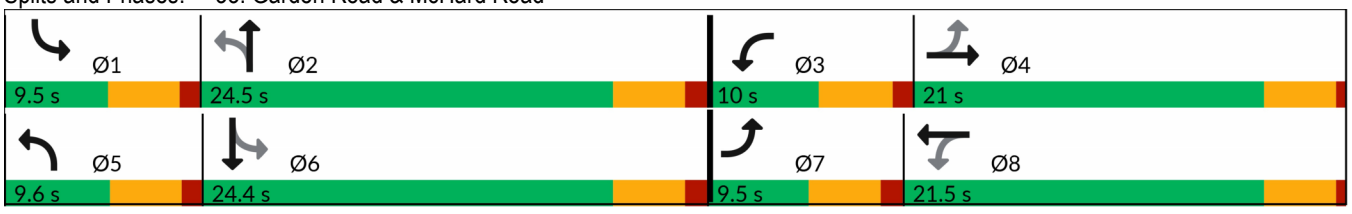


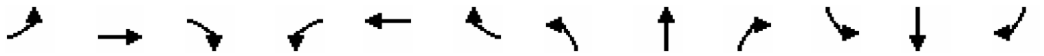
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	461	58	68	453	15	41	17	57	19	18	15
Future Volume (vph)	14	461	58	68	453	15	41	17	57	19	18	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.983			0.995			0.884			0.933	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3522	0	1770	3129	0	1770	3302	0
Flt Permitted	0.416			0.262			0.679			0.702		
Satd. Flow (perm)	775	3479	0	488	3522	0	1265	3129	0	1308	3302	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			5			62			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2021			2019			1010			1120	
Travel Time (s)		45.9			45.9			23.0			25.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	501	63	74	492	16	45	18	62	21	20	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	564	0	74	508	0	45	80	0	21	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	9.5	21.0		10.0	21.5		9.6	24.5		9.5	24.4	
Total Split (%)	14.6%	32.3%		15.4%	33.1%		14.8%	37.7%		14.6%	37.5%	
Maximum Green (s)	5.0	17.0		5.5	17.5		5.1	20.0		5.0	19.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0			5.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	15.9	13.9		17.7	17.3		25.4	24.5		23.8	21.3	
Actuated g/C Ratio	0.29	0.26		0.33	0.32		0.47	0.45		0.44	0.39	
v/c Ratio	0.05	0.62		0.25	0.45		0.07	0.06		0.03	0.03	
Control Delay (s/veh)	12.1	21.9		14.2	16.5		10.1	6.0		10.2	11.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	12.1	21.9		14.2	16.5		10.1	6.0		10.2	11.5	
LOS	B	C		B	B		B	A		B	B	
Approach Delay (s/veh)		21.6			16.2			7.5			11.0	
Approach LOS		C			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 54.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 17.5		Intersection LOS: B	
Intersection Capacity Utilization 38.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 33: Garden Road & McHard Road



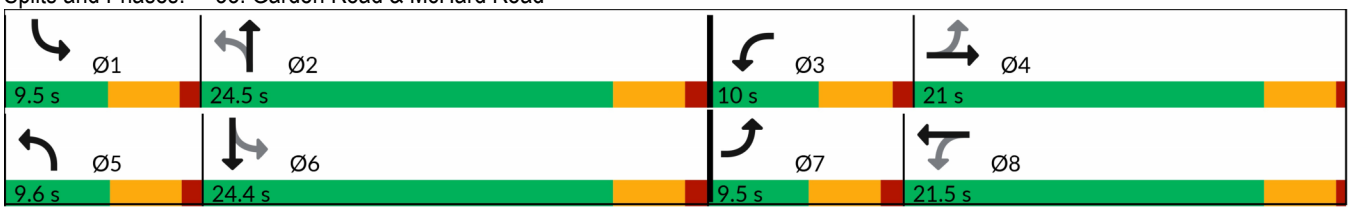


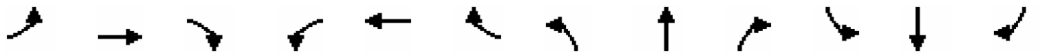
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	322	26	49	355	80	42	87	39	5	13	16
Future Volume (vph)	89	322	26	49	355	80	42	87	39	5	13	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.989			0.972			0.954			0.918	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3500	0	1770	3440	0	1770	3376	0	1770	3249	0
Flt Permitted	0.341			0.494			0.679			0.665		
Satd. Flow (perm)	635	3500	0	920	3440	0	1265	3376	0	1239	3249	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			41			42			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2021			2019			1010			1120	
Travel Time (s)		45.9			45.9			23.0			25.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	97	350	28	53	386	87	46	95	42	5	14	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	378	0	53	473	0	46	137	0	5	31	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	9.5	21.0		10.0	21.5		9.6	24.5		9.5	24.4	
Total Split (%)	14.6%	32.3%		15.4%	33.1%		14.8%	37.7%		14.6%	37.5%	
Maximum Green (s)	5.0	17.0		5.5	17.5		5.1	20.0		5.0	19.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		5.0			5.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	16.7	14.6		16.3	12.7		25.2	24.4		23.6	21.0	
Actuated g/C Ratio	0.31	0.27		0.30	0.23		0.46	0.45		0.43	0.38	
v/c Ratio	0.32	0.40		0.15	0.57		0.07	0.09		0.01	0.02	
Control Delay (s/veh)	15.4	19.1		13.0	20.8		9.8	9.1		9.6	10.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.4	19.1		13.0	20.8		9.8	9.1		9.6	10.4	
LOS	B	B		B	C		A	A		A	B	
Approach Delay (s/veh)		18.4			20.0			9.3			10.3	
Approach LOS		B			C			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 54.7			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay (s/veh): 17.5		Intersection LOS: B	
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 33: Garden Road & McHard Road



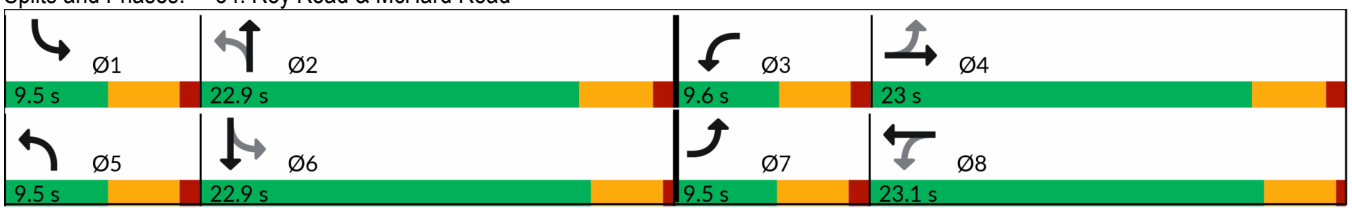


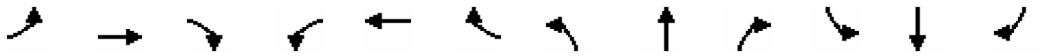
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	511	45	63	422	5	30	4	29	5	6	4
Future Volume (vph)	8	511	45	63	422	5	30	4	29	5	6	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		150	100		0	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.988			0.998			0.867			0.945	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3532	0	1770	3068	0	1770	3345	0
Flt Permitted	0.470			0.275			0.721			0.732		
Satd. Flow (perm)	875	3497	0	512	3532	0	1343	3068	0	1364	3345	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			2			432			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1957			2021			616			706	
Travel Time (s)		44.5			45.9			14.0			16.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	555	49	68	459	5	33	4	32	5	7	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	604	0	68	464	0	33	36	0	5	11	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	5.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	22.5		9.5	20.0	
Total Split (s)	9.5	23.0		9.6	23.1		9.5	22.9		9.5	22.9	
Total Split (%)	14.6%	35.4%		14.8%	35.5%		14.6%	35.2%		14.6%	35.2%	
Maximum Green (s)	5.0	18.5		5.1	19.1		5.0	18.4		5.0	18.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	1.0		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.5		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			5.0			7.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	16.8	14.3		18.5	18.2		21.8	21.0		21.1	20.1	
Actuated g/C Ratio	0.33	0.28		0.36	0.35		0.42	0.41		0.41	0.39	
v/c Ratio	0.02	0.62		0.21	0.37		0.05	0.02		0.01	0.01	
Control Delay (s/veh)	10.5	20.0		12.1	14.0		11.1	0.0		10.8	13.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.5	20.0		12.1	14.0		11.1	0.0		10.8	13.4	
LOS	B	B		B	B		B	A		B	B	
Approach Delay (s/veh)		19.8			13.7			5.3			12.6	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 51.3			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 16.3		Intersection LOS: B	
Intersection Capacity Utilization 39.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 34: Roy Road & McHard Road



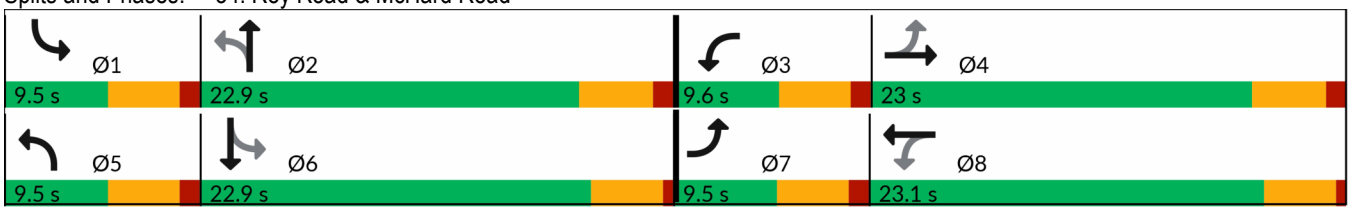


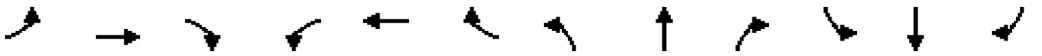
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	350	22	52	371	3	26	7	62	8	5	6
Future Volume (vph)	6	350	22	52	371	3	26	7	62	8	5	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		150	100		0	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.991			0.999			0.866			0.912	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3507	0	1770	3536	0	1770	3065	0	1770	3228	0
Flt Permitted	0.513			0.413			0.721			0.706		
Satd. Flow (perm)	956	3507	0	769	3536	0	1343	3065	0	1315	3228	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1			67			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1957			2021			616			706	
Travel Time (s)		44.5			45.9			14.0			16.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	380	24	57	403	3	28	8	67	9	5	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	404	0	57	406	0	28	75	0	9	12	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	5.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	22.5		9.5	20.0	
Total Split (s)	9.5	23.0		9.6	23.1		9.5	22.9		9.5	22.9	
Total Split (%)	14.6%	35.4%		14.8%	35.5%		14.6%	35.2%		14.6%	35.2%	
Maximum Green (s)	5.0	18.5		5.1	19.1		5.0	18.4		5.0	18.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	1.0		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.5		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			5.0			7.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	13.8	11.2		15.5	15.2		21.9	21.1		21.2	20.1	
Actuated g/C Ratio	0.29	0.23		0.32	0.31		0.45	0.44		0.44	0.42	
v/c Ratio	0.02	0.49		0.16	0.36		0.04	0.05		0.01	0.01	
Control Delay (s/veh)	11.0	19.2		12.0	14.6		9.7	5.2		9.6	11.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	11.0	19.2		12.0	14.6		9.7	5.2		9.6	11.0	
LOS	B	B		B	B		A	A		A	B	
Approach Delay (s/veh)		19.1			14.3			6.5			10.4	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 48.3			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 15.4		Intersection LOS: B	
Intersection Capacity Utilization 33.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 34: Roy Road & McHard Road



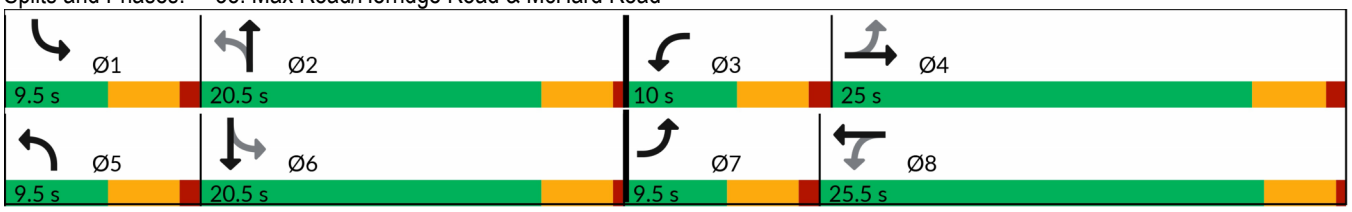


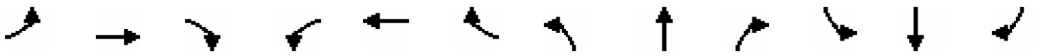
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	483	51	76	412	7	32	17	42	6	8	5
Future Volume (vph)	9	483	51	76	412	7	32	17	42	6	8	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	120		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.986			0.997			0.892			0.946	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3490	0	1770	3529	0	1770	3157	0	1770	3348	0
Flt Permitted	0.489			0.303			0.748			0.713		
Satd. Flow (perm)	911	3490	0	564	3529	0	1393	3157	0	1328	3348	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			3			46			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2239			1957			302			796	
Travel Time (s)		50.9			44.5			6.9			18.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	525	55	83	448	8	35	18	46	7	9	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	580	0	83	456	0	35	64	0	7	14	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	25.0		10.0	25.5		9.5	20.5		9.5	20.5	
Total Split (%)	14.6%	38.5%		15.4%	39.2%		14.6%	31.5%		14.6%	31.5%	
Maximum Green (s)	5.0	20.5		5.5	21.5		5.0	16.5		5.0	16.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		7.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	16.7	14.1		18.7	18.5		17.6	17.4		17.6	17.4	
Actuated g/C Ratio	0.35	0.30		0.40	0.39		0.37	0.37		0.37	0.37	
v/c Ratio	0.02	0.55		0.22	0.33		0.06	0.05		0.01	0.01	
Control Delay (s/veh)	8.2	16.5		9.7	11.3		12.4	8.0		12.2	12.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	8.2	16.5		9.7	11.3		12.4	8.0		12.2	12.9	
LOS	A	B		A	B		B	A		B	B	
Approach Delay (s/veh)		16.4			11.1			9.5			12.7	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 47.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 13.5		Intersection LOS: B	
Intersection Capacity Utilization 38.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 35: Max Road/Herridge Road & McHard Road



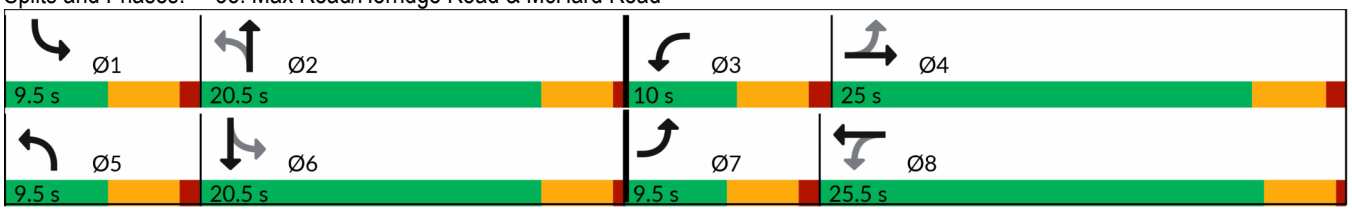


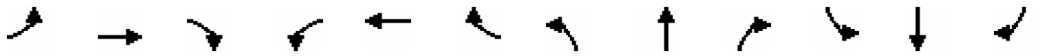
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	302	39	45	357	6	55	19	63	9	7	11
Future Volume (vph)	1	302	39	45	357	6	55	19	63	9	7	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	120		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.983			0.997			0.885			0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3529	0	1770	3132	0	1770	3221	0
Flt Permitted	0.519			0.487			0.625			0.696		
Satd. Flow (perm)	967	3479	0	907	3529	0	1164	3132	0	1296	3221	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			3			68			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2239			1957			302			796	
Travel Time (s)		50.9			44.5			6.9			18.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	328	42	49	388	7	60	21	68	10	8	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	370	0	49	395	0	60	89	0	10	20	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	25.0		10.0	25.5		9.5	20.5		9.5	20.5	
Total Split (%)	14.6%	38.5%		15.4%	39.2%		14.6%	31.5%		14.6%	31.5%	
Maximum Green (s)	5.0	20.5		5.5	21.5		5.0	16.5		5.0	16.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		7.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	11.5	9.9		12.6	12.3		17.6	17.5		15.7	15.6	
Actuated g/C Ratio	0.28	0.24		0.31	0.30		0.43	0.43		0.38	0.38	
v/c Ratio	0.00	0.43		0.12	0.37		0.10	0.06		0.02	0.02	
Control Delay (s/veh)	9.0	15.2		10.0	13.0		9.4	5.8		12.2	11.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.0	15.2		10.0	13.0		9.4	5.8		12.2	11.0	
LOS	A	B		A	B		A	A		B	B	
Approach Delay (s/veh)		15.2			12.7			7.3			11.4	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 40.9			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay (s/veh): 12.8		Intersection LOS: B	
Intersection Capacity Utilization 34.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 35: Max Road/Herridge Road & McHard Road



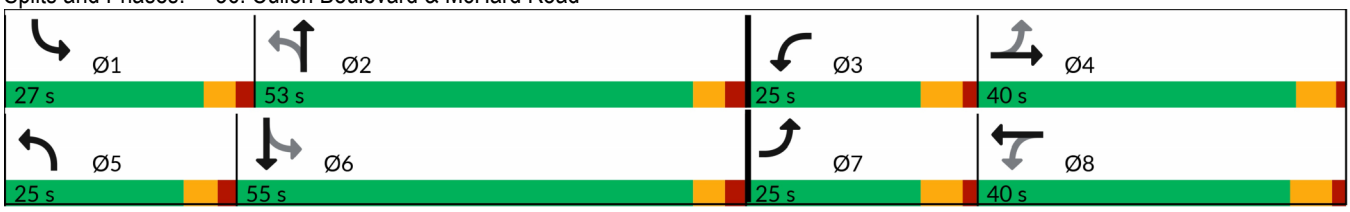


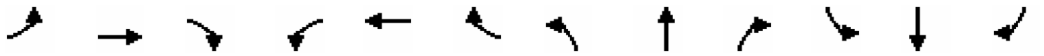
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	390	246	63	325	128	185	566	50	199	1020	193
Future Volume (vph)	166	390	246	63	325	128	185	566	50	199	1020	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	120		0	300		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.942			0.958			0.988			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3334	0	1770	3391	0	1770	3497	0	1770	3454	0
Flt Permitted	0.208			0.216			0.078			0.303		
Satd. Flow (perm)	387	3334	0	402	3391	0	145	3497	0	564	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		90			38			7			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		283			3590			1925			1330	
Travel Time (s)		6.4			81.6			43.8			30.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	180	424	267	68	353	139	201	615	54	216	1109	210
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	691	0	68	492	0	201	669	0	216	1319	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0		3.0	7.0		3.0	5.0		5.0	3.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	23.5		20.0	23.5	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	53.0		27.0	55.0	
Total Split (%)	17.2%	27.6%		17.2%	27.6%		17.2%	36.6%		18.6%	37.9%	
Maximum Green (s)	19.0	34.5		19.0	34.0		19.5	47.5		21.5	49.5	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.0		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.8	32.5		31.6	22.9		66.0	51.2		63.7	50.0	
Actuated g/C Ratio	0.35	0.26		0.25	0.18		0.52	0.41		0.51	0.40	
v/c Ratio	0.60	0.75		0.35	0.76		0.76	0.47		0.52	0.95	
Control Delay (s/veh)	38.7	43.8		33.5	53.5		48.7	30.3		20.4	53.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	38.7	43.8		33.5	53.5		48.7	30.3		20.4	53.2	
LOS	D	D		C	D		D	C		C	D	
Approach Delay (s/veh)		42.7			51.1			34.6			48.6	
Approach LOS		D			D			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 125.9			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay (s/veh): 44.4		Intersection LOS: D	
Intersection Capacity Utilization 86.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 36: Cullen Boulevard & McHard Road



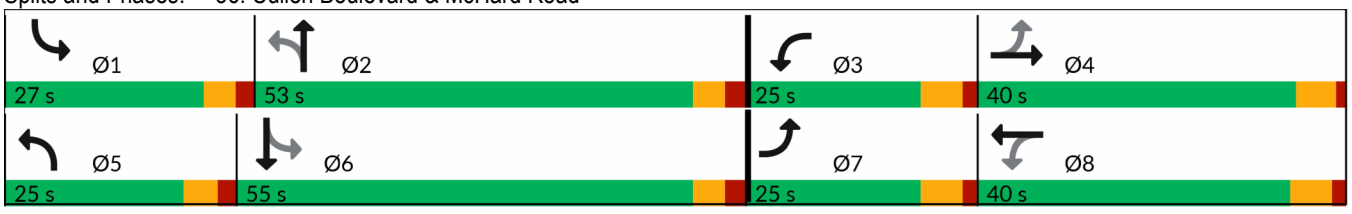


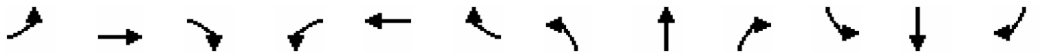
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	228	160	57	272	221	146	805	38	105	461	124
Future Volume (vph)	148	228	160	57	272	221	146	805	38	105	461	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	120		0	300		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.938			0.933			0.993			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3320	0	1770	3302	0	1770	3514	0	1770	3426	0
Flt Permitted	0.168			0.506			0.309			0.200		
Satd. Flow (perm)	313	3320	0	943	3302	0	576	3514	0	373	3426	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		116			132			3			25	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		283			3590			1925			1330	
Travel Time (s)		6.4			81.6			43.8			30.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	248	174	62	296	240	159	875	41	114	501	135
Shared Lane Traffic (%)												
Lane Group Flow (vph)	161	422	0	62	536	0	159	916	0	114	636	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0		3.0	7.0		3.0	5.0		5.0	3.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	23.5		20.0	23.5	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	53.0		27.0	55.0	
Total Split (%)	17.2%	27.6%		17.2%	27.6%		17.2%	36.6%		18.6%	37.9%	
Maximum Green (s)	19.0	34.5		19.0	34.0		19.5	47.5		21.5	49.5	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.0		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	41.6	30.7		29.6	21.3		63.6	52.0		59.5	50.0	
Actuated g/C Ratio	0.35	0.25		0.25	0.18		0.53	0.43		0.49	0.41	
v/c Ratio	0.57	0.45		0.22	0.77		0.38	0.60		0.39	0.44	
Control Delay (s/veh)	36.3	29.4		28.8	43.9		17.4	30.0		18.7	27.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	36.3	29.4		28.8	43.9		17.4	30.0		18.7	27.2	
LOS	D	C		C	D		B	C		B	C	
Approach Delay (s/veh)		31.3			42.3			28.1			25.9	
Approach LOS		C			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 120.5			
Natural Cycle: 115			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 31.0		Intersection LOS: C	
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 36: Cullen Boulevard & McHard Road



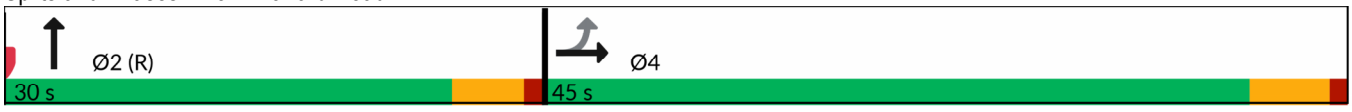


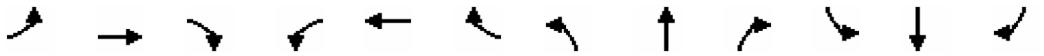
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	757	0	0	0	0	0	67	24	0	0	0
Future Volume (vph)	141	757	0	0	0	0	0	67	24	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.961				
Flt Protected	0.950											
Satd. Flow (prot)	1770	3539	0	0	0	0	0	3401	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	3539	0	0	0	0	0	3401	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	153							26				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		553			824			256			481	
Travel Time (s)		12.6			18.7			5.8			10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	153	823	0	0	0	0	0	73	26	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	823	0	0	0	0	0	99	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2				
Detector Template	Left	Thru						Thru				
Leading Detector (ft)	20	100						100				
Trailing Detector (ft)	0	0						0				
Detector 1 Position(ft)	0	0						0				
Detector 1 Size(ft)	20	6						6				
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0				
Detector 1 Queue (s)	0.0	0.0						0.0				
Detector 1 Delay (s)	0.0	0.0						0.0				
Detector 2 Position(ft)		94						94				
Detector 2 Size(ft)		6						6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type	Perm	NA						NA				
Protected Phases		4						2				
Permitted Phases	4											
Detector Phase	4	4						2				
Switch Phase												
Minimum Initial (s)	20.0	20.0						10.0				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	35.0	35.0						25.0				
Total Split (s)	45.0	45.0						30.0				
Total Split (%)	60.0%	60.0%						40.0%				
Maximum Green (s)	39.5	39.5						25.0				
Yellow Time (s)	4.5	4.5						4.0				
All-Red Time (s)	1.0	1.0						1.0				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	5.5	5.5						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0				
Recall Mode	None	None						C-Max				
Walk Time (s)	7.0	7.0						7.0				
Flash Don't Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	26.9	26.9						37.6				
Actuated g/C Ratio	0.36	0.36						0.50				
v/c Ratio	0.21	0.65						0.06				
Control Delay (s/veh)	3.1	22.0						9.2				
Queue Delay	0.0	0.0						0.0				
Total Delay (s/veh)	3.1	22.0						9.2				
LOS	A	C						A				
Approach Delay (s/veh)		19.1						9.2				
Approach LOS		B						A				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay (s/veh): 18.2		Intersection LOS: B	
Intersection Capacity Utilization 69.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 37: McHard Road



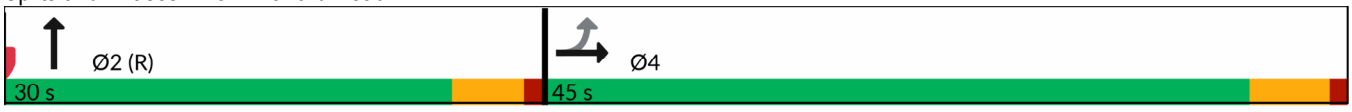


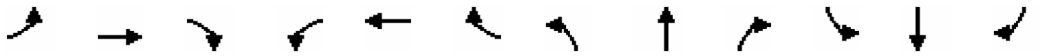
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	509	0	0	0	0	0	41	30	0	0	0
Future Volume (vph)	35	509	0	0	0	0	0	41	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.937				
Flt Protected	0.950											
Satd. Flow (prot)	1770	3539	0	0	0	0	0	3316	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	3539	0	0	0	0	0	3316	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	38							33				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		553			824			256			481	
Travel Time (s)		12.6			18.7			5.8			10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	553	0	0	0	0	0	45	33	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	553	0	0	0	0	0	78	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2				
Detector Template	Left	Thru						Thru				
Leading Detector (ft)	20	100						100				
Trailing Detector (ft)	0	0						0				
Detector 1 Position(ft)	0	0						0				
Detector 1 Size(ft)	20	6						6				
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0				
Detector 1 Queue (s)	0.0	0.0						0.0				
Detector 1 Delay (s)	0.0	0.0						0.0				
Detector 2 Position(ft)		94						94				
Detector 2 Size(ft)		6						6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type	Perm	NA						NA				
Protected Phases		4						2				
Permitted Phases	4											
Detector Phase	4	4						2				
Switch Phase												
Minimum Initial (s)	20.0	20.0						10.0				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	35.0	35.0						25.0				
Total Split (s)	45.0	45.0						30.0				
Total Split (%)	60.0%	60.0%						40.0%				
Maximum Green (s)	39.5	39.5						25.0				
Yellow Time (s)	4.5	4.5						4.0				
All-Red Time (s)	1.0	1.0						1.0				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	5.5	5.5						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0				
Recall Mode	None	None						C-Max				
Walk Time (s)	7.0	7.0						7.0				
Flash Don't Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	20.9	20.9						43.6				
Actuated g/C Ratio	0.28	0.28						0.58				
v/c Ratio	0.07	0.56						0.04				
Control Delay (s/veh)	7.1	25.5						4.9				
Queue Delay	0.0	0.0						0.0				
Total Delay (s/veh)	7.1	25.5						4.9				
LOS	A	C						A				
Approach Delay (s/veh)		24.3						4.9				
Approach LOS		C						A				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 22.0		Intersection LOS: C	
Intersection Capacity Utilization 55.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 37: McHard Road



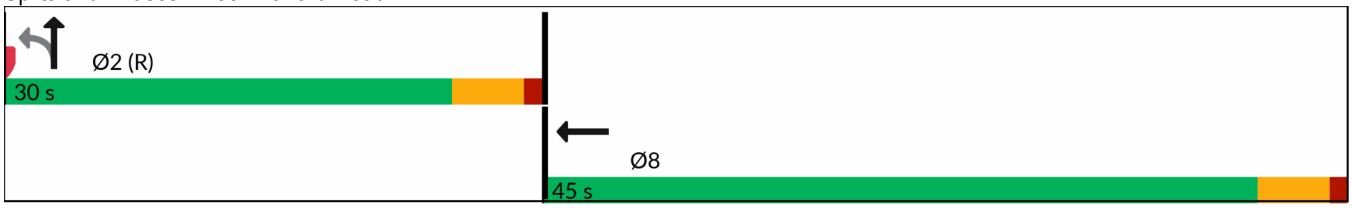


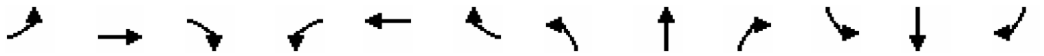
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	692	54	84	127	0	0	0	0
Future Volume (vph)	0	0	0	0	692	54	84	127	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt					0.989							
Flt Protected								0.981				
Satd. Flow (prot)	0	0	0	0	3500	0	0	3472	0	0	0	0
Flt Permitted								0.981				
Satd. Flow (perm)	0	0	0	0	3500	0	0	3472	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					16			91				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			3717			481			228	
Travel Time (s)		14.8			84.5			10.9			5.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	752	59	91	138	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	811	0	0	229	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					6		20	6				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type					NA		Perm	NA				
Protected Phases					8			2				
Permitted Phases							2					
Detector Phase					8		2	2				
Switch Phase												
Minimum Initial (s)					20.0		10.0	10.0				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)					35.0		25.0	25.0				
Total Split (s)					45.0		30.0	30.0				
Total Split (%)					60.0%		40.0%	40.0%				
Maximum Green (s)					40.0		25.0	25.0				
Yellow Time (s)					4.0		4.0	4.0				
All-Red Time (s)					1.0		1.0	1.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					3.0		3.0	3.0				
Recall Mode					None		C-Max	C-Max				
Walk Time (s)					7.0		7.0	7.0				
Flash Don't Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					25.6			39.4				
Actuated g/C Ratio					0.34			0.53				
v/c Ratio					0.67			0.12				
Control Delay (s/veh)					23.2			6.1				
Queue Delay					0.0			0.0				
Total Delay (s/veh)					23.2			6.1				
LOS					C			A				
Approach Delay (s/veh)					23.2			6.1				
Approach LOS					C			A				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 19.4		Intersection LOS: B	
Intersection Capacity Utilization 37.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 38: McHard Road



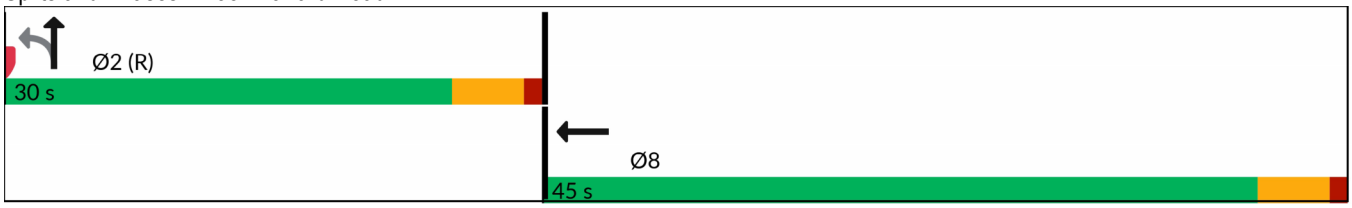


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	551	30	57	42	0	0	0	0
Future Volume (vph)	0	0	0	0	551	30	57	42	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt					0.992							
Flt Protected								0.972				
Satd. Flow (prot)	0	0	0	0	3511	0	0	3440	0	0	0	0
Flt Permitted								0.972				
Satd. Flow (perm)	0	0	0	0	3511	0	0	3440	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					11			62				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			3717			481			228	
Travel Time (s)		14.8			84.5			10.9			5.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	599	33	62	46	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	632	0	0	108	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					6		20	6				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type					NA		Perm	NA				
Protected Phases					8			2				
Permitted Phases							2					
Detector Phase					8		2	2				
Switch Phase												
Minimum Initial (s)					20.0		10.0	10.0				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)					35.0		25.0	25.0				
Total Split (s)					45.0		30.0	30.0				
Total Split (%)					60.0%		40.0%	40.0%				
Maximum Green (s)					40.0		25.0	25.0				
Yellow Time (s)					4.0		4.0	4.0				
All-Red Time (s)					1.0		1.0	1.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					3.0		3.0	3.0				
Recall Mode					None		C-Max	C-Max				
Walk Time (s)					7.0		7.0	7.0				
Flash Don't Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					21.7			43.3				
Actuated g/C Ratio					0.29			0.58				
v/c Ratio					0.62			0.05				
Control Delay (s/veh)					25.2			4.0				
Queue Delay					0.0			0.0				
Total Delay (s/veh)					25.2			4.0				
LOS					C			A				
Approach Delay (s/veh)					25.2			4.0				
Approach LOS					C			A				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 22.1		Intersection LOS: C	
Intersection Capacity Utilization 33.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 38: McHard Road

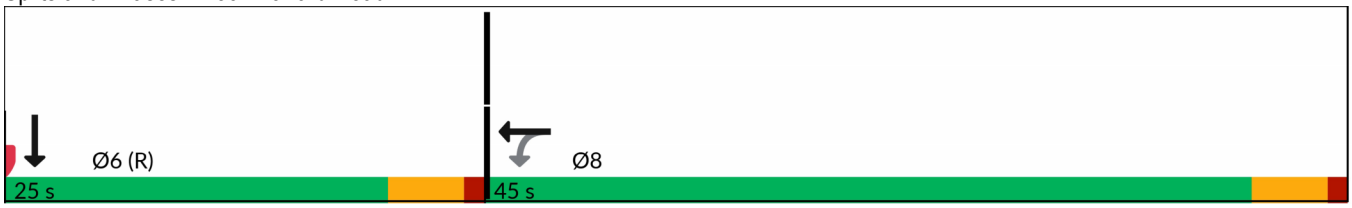


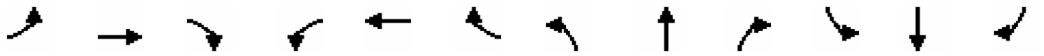
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	47	732	0	0	0	0	0	41	76
Future Volume (vph)	0	0	0	47	732	0	0	0	0	0	41	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt											0.903	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1770	3539	0	0	0	0	0	3196	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1770	3539	0	0	0	0	0	3196	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)				51							83	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1629			651			450			272	
Travel Time (s)		37.0			14.8			10.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	51	796	0	0	0	0	0	45	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	51	796	0	0	0	0	0	128	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2						2	
Detector Template				Left	Thru						Thru	
Leading Detector (ft)				20	100						100	
Trailing Detector (ft)				0	0						0	
Detector 1 Position(ft)				0	0						0	
Detector 1 Size(ft)				20	6						6	
Detector 1 Type				Cl+Ex	Cl+Ex						Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0						0.0	
Detector 1 Queue (s)				0.0	0.0						0.0	
Detector 1 Delay (s)				0.0	0.0						0.0	
Detector 2 Position(ft)					94						94	
Detector 2 Size(ft)					6						6	
Detector 2 Type					Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0						0.0	
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Detector Phase				8	8						6	
Switch Phase												
Minimum Initial (s)				20.0	20.0						10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				35.0	35.0						23.0	
Total Split (s)				45.0	45.0						25.0	
Total Split (%)				64.3%	64.3%						35.7%	
Maximum Green (s)				40.0	40.0						20.0	
Yellow Time (s)				4.0	4.0						4.0	
All-Red Time (s)				1.0	1.0						1.0	
Lost Time Adjust (s)				0.0	0.0						0.0	
Total Lost Time (s)				5.0	5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0						3.0	
Recall Mode				None	None						C-Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Don't Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)				24.6	24.6						35.4	
Actuated g/C Ratio				0.35	0.35						0.51	
v/c Ratio				0.08	0.64						0.08	
Control Delay (s/veh)				4.2	21.0						5.2	
Queue Delay				0.0	0.0						0.0	
Total Delay (s/veh)				4.2	21.0						5.2	
LOS				A	C						A	
Approach Delay (s/veh)					20.0						5.2	
Approach LOS					B						A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay (s/veh): 18.0		Intersection LOS: B	
Intersection Capacity Utilization 37.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 39: McHard Road



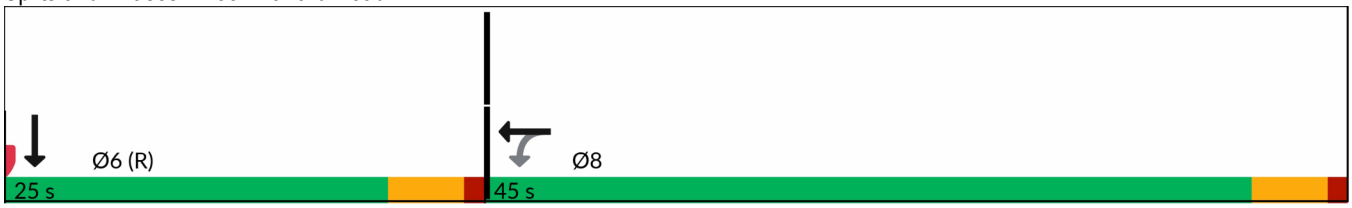


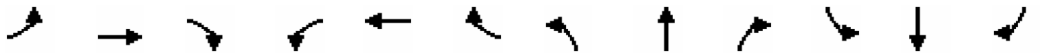
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	25	587	0	0	0	0	0	64	95
Future Volume (vph)	0	0	0	25	587	0	0	0	0	0	64	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt											0.911	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1770	3539	0	0	0	0	0	3224	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1770	3539	0	0	0	0	0	3224	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)				31							103	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1629			651			450			272	
Travel Time (s)		37.0			14.8			10.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	27	638	0	0	0	0	0	70	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	27	638	0	0	0	0	0	173	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2						2	
Detector Template				Left	Thru						Thru	
Leading Detector (ft)				20	100						100	
Trailing Detector (ft)				0	0						0	
Detector 1 Position(ft)				0	0						0	
Detector 1 Size(ft)				20	6						6	
Detector 1 Type				Cl+Ex	Cl+Ex						Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0						0.0	
Detector 1 Queue (s)				0.0	0.0						0.0	
Detector 1 Delay (s)				0.0	0.0						0.0	
Detector 2 Position(ft)					94						94	
Detector 2 Size(ft)					6						6	
Detector 2 Type					Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0						0.0	
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Detector Phase				8	8						6	
Switch Phase												
Minimum Initial (s)				20.0	20.0						10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)				35.0	35.0						23.0	
Total Split (s)				45.0	45.0						25.0	
Total Split (%)				64.3%	64.3%						35.7%	
Maximum Green (s)				40.0	40.0						20.0	
Yellow Time (s)				4.0	4.0						4.0	
All-Red Time (s)				1.0	1.0						1.0	
Lost Time Adjust (s)				0.0	0.0						0.0	
Total Lost Time (s)				5.0	5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0						3.0	
Recall Mode				None	None						C-Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Don't Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)				21.8	21.8						38.2	
Actuated g/C Ratio				0.31	0.31						0.55	
v/c Ratio				0.05	0.58						0.10	
Control Delay (s/veh)				5.7	22.3						4.1	
Queue Delay				0.0	0.0						0.0	
Total Delay (s/veh)				5.7	22.3						4.1	
LOS				A	C						A	
Approach Delay (s/veh)					21.6						4.1	
Approach LOS					C						A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay (s/veh): 18.0		Intersection LOS: B	
Intersection Capacity Utilization 33.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 39: McHard Road



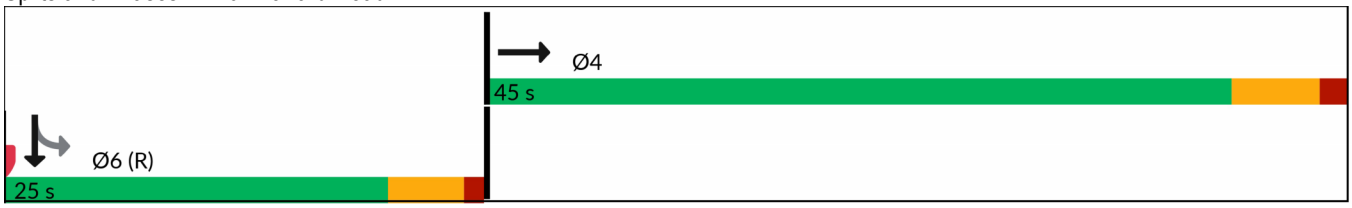


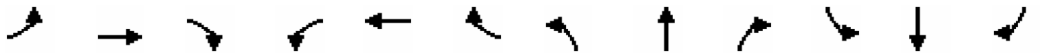
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	857	87	0	0	0	0	0	0	44	43	0
Future Volume (vph)	0	857	87	0	0	0	0	0	0	44	43	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.986										
Flt Protected											0.975	
Satd. Flow (prot)	0	3490	0	0	0	0	0	0	0	0	3451	0
Flt Permitted											0.975	
Satd. Flow (perm)	0	3490	0	0	0	0	0	0	0	0	3451	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		25									48	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1663			553			168			450	
Travel Time (s)		37.8			12.6			3.8			10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	932	95	0	0	0	0	0	0	48	47	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1027	0	0	0	0	0	0	0	0	95	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2								1	2	
Detector Template		Thru								Left	Thru	
Leading Detector (ft)		100								20	100	
Trailing Detector (ft)		0								0	0	
Detector 1 Position(ft)		0								0	0	
Detector 1 Size(ft)		6								20	6	
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0								0.0	0.0	
Detector 1 Queue (s)		0.0								0.0	0.0	
Detector 1 Delay (s)		0.0								0.0	0.0	
Detector 2 Position(ft)		94									94	
Detector 2 Size(ft)		6									6	
Detector 2 Type		Cl+Ex									Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0									0.0	
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Detector Phase		4								6	6	
Switch Phase												
Minimum Initial (s)		20.0								10.0	10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		35.0								23.0	23.0	
Total Split (s)		45.0								25.0	25.0	
Total Split (%)		64.3%								35.7%	35.7%	
Maximum Green (s)		39.0								20.0	20.0	
Yellow Time (s)		4.5								4.0	4.0	
All-Red Time (s)		1.5								1.0	1.0	
Lost Time Adjust (s)		0.0									0.0	
Total Lost Time (s)		6.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0								3.0	3.0	
Recall Mode		None								C-Max	C-Max	
Walk Time (s)		7.0								7.0	7.0	
Flash Don't Walk (s)		11.0								11.0	11.0	
Pedestrian Calls (#/hr)		0								0	0	
Act Effct Green (s)		29.6									29.4	
Actuated g/C Ratio		0.42									0.42	
v/c Ratio		0.69									0.06	
Control Delay (s/veh)		18.0									8.5	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		18.0									8.5	
LOS		B									A	
Approach Delay (s/veh)		18.0									8.5	
Approach LOS		B									A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 17.2		Intersection LOS: B	
Intersection Capacity Utilization 44.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 40: McHard Road



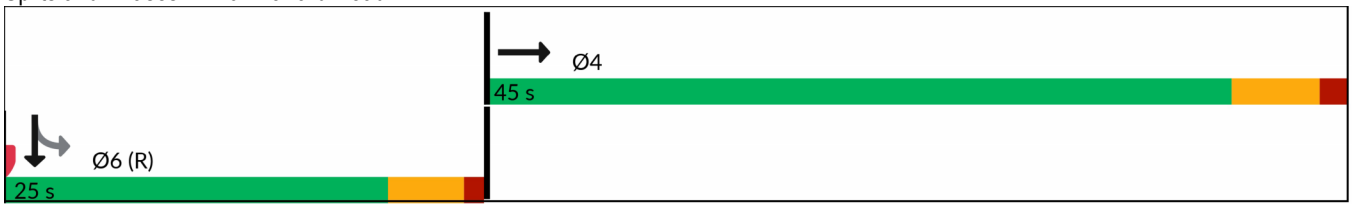


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	474	37	0	0	0	0	0	0	69	18	0
Future Volume (vph)	0	474	37	0	0	0	0	0	0	69	18	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.989										
Flt Protected											0.962	
Satd. Flow (prot)	0	3500	0	0	0	0	0	0	0	0	3405	0
Flt Permitted											0.962	
Satd. Flow (perm)	0	3500	0	0	0	0	0	0	0	0	3405	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		18									75	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1663			553			168			450	
Travel Time (s)		37.8			12.6			3.8			10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	515	40	0	0	0	0	0	0	75	20	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	555	0	0	0	0	0	0	0	0	95	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2								1	2	
Detector Template		Thru								Left	Thru	
Leading Detector (ft)		100								20	100	
Trailing Detector (ft)		0								0	0	
Detector 1 Position(ft)		0								0	0	
Detector 1 Size(ft)		6								20	6	
Detector 1 Type		Cl+Ex								Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0								0.0	0.0	
Detector 1 Queue (s)		0.0								0.0	0.0	
Detector 1 Delay (s)		0.0								0.0	0.0	
Detector 2 Position(ft)		94									94	
Detector 2 Size(ft)		6									6	
Detector 2 Type		Cl+Ex									Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0									0.0	
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Detector Phase		4								6	6	
Switch Phase												
Minimum Initial (s)		20.0								10.0	10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		35.0								23.0	23.0	
Total Split (s)		45.0								25.0	25.0	
Total Split (%)		64.3%								35.7%	35.7%	
Maximum Green (s)		39.0								20.0	20.0	
Yellow Time (s)		4.5								4.0	4.0	
All-Red Time (s)		1.5								1.0	1.0	
Lost Time Adjust (s)		0.0									0.0	
Total Lost Time (s)		6.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0								3.0	3.0	
Recall Mode		None								C-Max	C-Max	
Walk Time (s)		7.0								7.0	7.0	
Flash Don't Walk (s)		11.0								11.0	11.0	
Pedestrian Calls (#/hr)		0								0	0	
Act Effct Green (s)		20.4									38.6	
Actuated g/C Ratio		0.29									0.55	
v/c Ratio		0.54									0.05	
Control Delay (s/veh)		22.3									2.3	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		22.3									2.3	
LOS		C									A	
Approach Delay (s/veh)		22.3									2.3	
Approach LOS		C									A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay (s/veh): 19.4		Intersection LOS: B	
Intersection Capacity Utilization 34.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 40: McHard Road

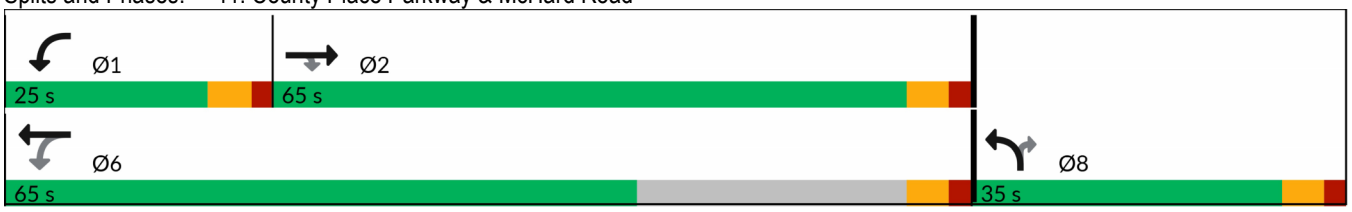


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	424	320	127	560	171	63
Future Volume (vph)	424	320	127	560	171	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	120		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		0	
Lane Util. Factor	0.91	0.91	1.00	0.95	1.00	1.00
Frt	0.973	0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3299	1441	1770	3539	1770	1583
Flt Permitted			0.252		0.950	
Satd. Flow (perm)	3299	1441	469	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	26	247				68
Link Speed (mph)	30			30	30	
Link Distance (ft)	975			186	512	
Travel Time (s)	22.2			4.2	11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	461	348	138	609	186	68
Shared Lane Traffic (%)		29%				
Lane Group Flow (vph)	562	247	138	609	186	68
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	3.0	20.0	5.0	5.0
Minimum Split (s)	65.0	65.0	20.0	45.0	25.0	25.0
Total Split (s)	65.0	65.0	25.0	65.0	35.0	35.0
Total Split (%)	52.0%	52.0%	20.0%	52.0%	28.0%	28.0%
Maximum Green (s)	59.0	59.0	19.0	59.0	29.0	29.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	21.9	21.9	36.8	36.8	29.1	29.1
Actuated g/C Ratio	0.28	0.28	0.47	0.47	0.37	0.37
v/c Ratio	0.60	0.42	0.37	0.36	0.28	0.11
Control Delay (s/veh)	26.0	5.6	14.6	13.7	19.5	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.0	5.6	14.6	13.7	19.5	5.7
LOS	C	A	B	B	B	A
Approach Delay (s/veh)	19.8			13.8	15.8	
Approach LOS	B			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 77.9			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay (s/veh): 16.8		Intersection LOS: B	
Intersection Capacity Utilization 48.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 41: County Place Parkway & McHard Road

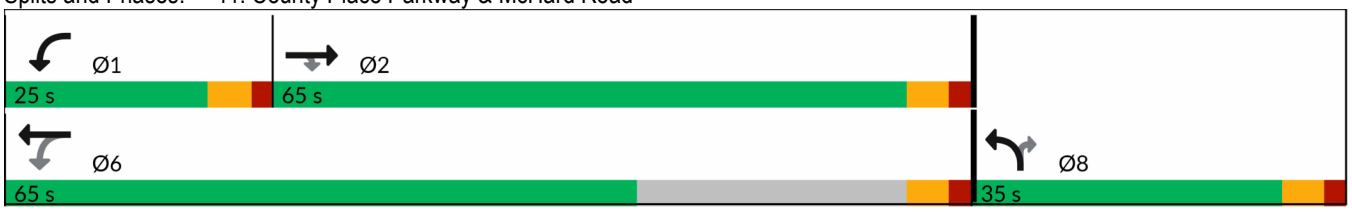


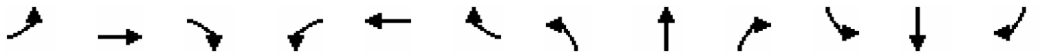
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	835	607	117	689	217	103
Future Volume (vph)	835	607	117	689	217	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	120		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		0	
Lane Util. Factor	0.91	0.91	1.00	0.95	1.00	1.00
Frt	0.975	0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3305	1441	1770	3539	1770	1583
Flt Permitted			0.116		0.950	
Satd. Flow (perm)	3305	1441	216	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	24	475				112
Link Speed (mph)	30			30	30	
Link Distance (ft)	975			186	512	
Travel Time (s)	22.2			4.2	11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	908	660	127	749	236	112
Shared Lane Traffic (%)		28%				
Lane Group Flow (vph)	1093	475	127	749	236	112
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	20.0	20.0	3.0	20.0	5.0	5.0
Minimum Split (s)	65.0	65.0	20.0	45.0	25.0	25.0
Total Split (s)	65.0	65.0	25.0	65.0	35.0	35.0
Total Split (%)	52.0%	52.0%	20.0%	52.0%	28.0%	28.0%
Maximum Green (s)	59.0	59.0	19.0	59.0	29.0	29.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	46.2	46.2	60.9	60.9	29.4	29.4
Actuated g/C Ratio	0.45	0.45	0.59	0.59	0.29	0.29
v/c Ratio	0.73	0.52	0.49	0.36	0.47	0.21
Control Delay (s/veh)	25.2	3.7	15.1	10.8	36.4	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.2	3.7	15.1	10.8	36.4	7.5
LOS	C	A	B	B	D	A
Approach Delay (s/veh)	18.7			11.4	27.1	
Approach LOS	B			B	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 102.4			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 17.5		Intersection LOS: B	
Intersection Capacity Utilization 63.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 41: County Place Parkway & McHard Road



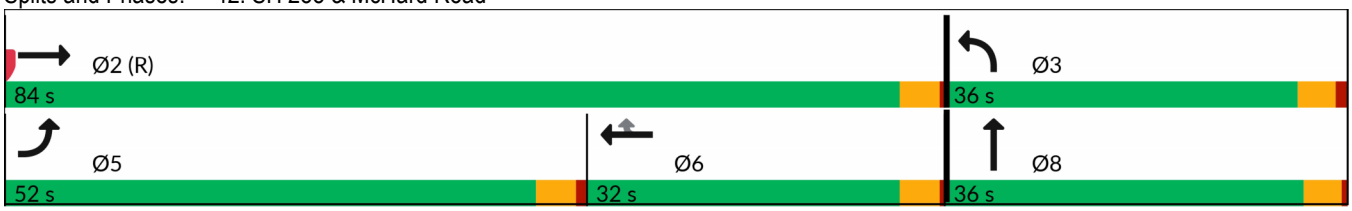


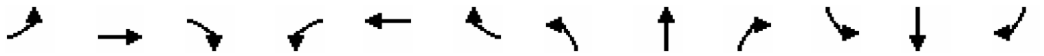
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	617	1284	0	0	498	343	387	263	130	0	0	0
Future Volume (vph)	617	1284	0	0	498	343	387	263	130	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt						0.850		0.950				
Flt Protected	0.950	0.998					0.950					
Satd. Flow (prot)	1610	3383	0	0	5085	1583	1770	3362	0	0	0	0
Flt Permitted	0.950	0.912					0.950					
Satd. Flow (perm)	1610	3092	0	0	5085	1583	1770	3362	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						181		69				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		505			975			278			566	
Travel Time (s)		11.5			22.2			6.3			12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	671	1396	0	0	541	373	421	286	141	0	0	0
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	604	1463	0	0	541	373	421	427	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Prot	NA				
Protected Phases	5	2			6		3	8				
Permitted Phases						6						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2			6	6	3	8				
Switch Phase												
Minimum Initial (s)	5.0	4.0			4.0	4.0	5.0	4.0				
Minimum Split (s)	9.5	20.0			20.0	20.0	9.5	20.0				
Total Split (s)	52.0	84.0			32.0	32.0	36.0	36.0				
Total Split (%)	43.3%	70.0%			26.7%	26.7%	30.0%	30.0%				
Maximum Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5				
All-Red Time (s)	1.0	0.5			0.5	0.5	1.0	0.5				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	4.0			4.0	4.0	4.5	4.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	None	C-Max			None	None	None	Max				
Walk Time (s)		5.0			5.0	5.0		5.0				
Flash Don't Walk (s)		11.0			11.0	11.0		11.0				
Pedestrian Calls (#/hr)		0			0	0		0				
Act Effct Green (s)	46.6	80.0			28.9	28.9	31.5	32.0				
Actuated g/C Ratio	0.39	0.67			0.24	0.24	0.26	0.27				
v/c Ratio	0.97	0.87			0.44	0.72	0.91	0.45				
Control Delay (s/veh)	65.2	21.8			40.3	30.2	67.6	32.2				
Queue Delay	33.5	6.0			0.0	0.0	0.0	0.0				
Total Delay (s/veh)	98.7	27.8			40.3	30.2	67.6	32.2				
LOS	F	C			D	C	E	C				
Approach Delay (s/veh)		48.5			36.2			49.8				
Approach LOS		D			D			D				

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 45.8		Intersection LOS: D	
Intersection Capacity Utilization 84.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 42: SH 288 & McHard Road



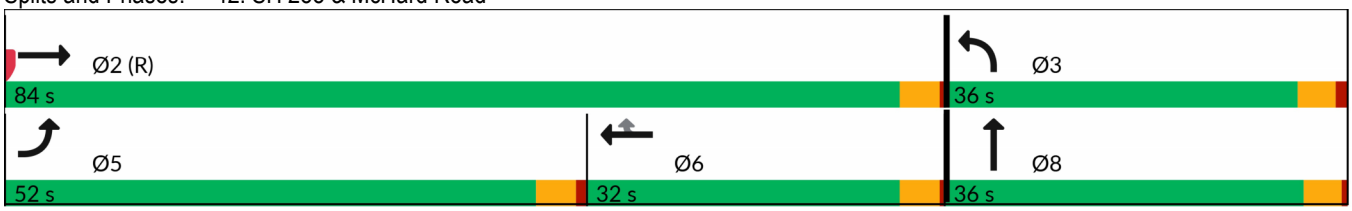


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	533	634	0	0	478	331	537	210	101	0	0	0
Future Volume (vph)	533	634	0	0	478	331	537	210	101	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt						0.850		0.951				
Flt Protected	0.950	0.990					0.950					
Satd. Flow (prot)	1610	3356	0	0	5085	1583	1770	3366	0	0	0	0
Flt Permitted	0.950	0.648					0.950					
Satd. Flow (perm)	1610	2197	0	0	5085	1583	1770	3366	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						244		66				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		505			975			278			566	
Travel Time (s)		11.5			22.2			6.3			12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	579	689	0	0	520	360	584	228	110	0	0	0
Shared Lane Traffic (%)	29%											
Lane Group Flow (vph)	411	857	0	0	520	360	584	338	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Prot	NA				
Protected Phases	5	2			6		3	8				
Permitted Phases						6						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2			6	6	3	8				
Switch Phase												
Minimum Initial (s)	5.0	4.0			4.0	4.0	5.0	4.0				
Minimum Split (s)	9.5	20.0			20.0	20.0	9.5	20.0				
Total Split (s)	52.0	84.0			32.0	32.0	36.0	36.0				
Total Split (%)	43.3%	70.0%			26.7%	26.7%	30.0%	30.0%				
Maximum Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5				
All-Red Time (s)	1.0	0.5			0.5	0.5	1.0	0.5				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	4.0			4.0	4.0	4.5	4.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	None	C-Max			None	None	None	Max				
Walk Time (s)		5.0			5.0	5.0		5.0				
Flash Don't Walk (s)		11.0			11.0	11.0		11.0				
Pedestrian Calls (#/hr)		0			0	0		0				
Act Effct Green (s)	36.4	80.0			39.1	39.1	31.5	32.0				
Actuated g/C Ratio	0.30	0.67			0.33	0.33	0.26	0.27				
v/c Ratio	0.84	0.73			0.31	0.53	1.26	0.36				
Control Delay (s/veh)	54.3	27.6			32.5	14.9	170.6	29.6				
Queue Delay	0.2	0.5			0.0	0.0	0.0	0.0				
Total Delay (s/veh)	54.6	28.1			32.5	14.9	170.6	29.6				
LOS	D	C			C	B	F	C				
Approach Delay (s/veh)		36.7			25.3			119.0				
Approach LOS		D			C			F				

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.26			
Intersection Signal Delay (s/veh): 58.1		Intersection LOS: E	
Intersection Capacity Utilization 58.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 42: SH 288 & McHard Road

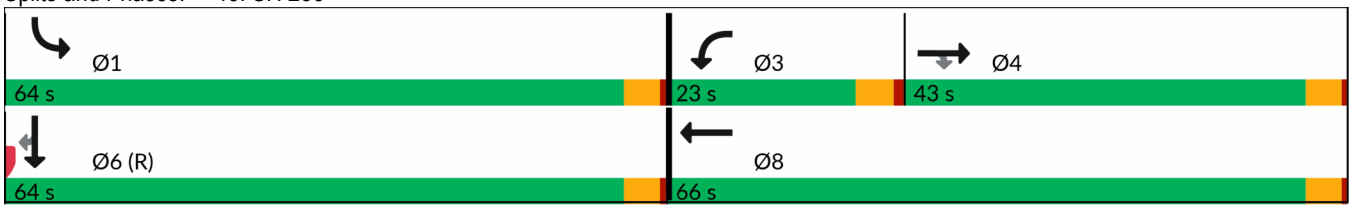


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱	↰	↑↑					↰	↑↑	↱
Traffic Volume (vph)	0	1255	397	217	824	0	0	0	0	677	446	437
Future Volume (vph)	0	1255	397	217	824	0	0	0	0	677	446	437
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			239									90
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		807			505			209			785	
Travel Time (s)		18.3			11.5			4.8			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1364	432	236	896	0	0	0	0	736	485	475
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1364	432	236	896	0	0	0	0	736	485	475
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8					1	6	6
Switch Phase												
Minimum Initial (s)		4.0	4.0	5.0	4.0					4.0	4.0	4.0
Minimum Split (s)		20.0	20.0	9.5	20.0					20.0	20.0	20.0
Total Split (s)		43.0	43.0	23.0	66.0					64.0	64.0	64.0
Total Split (%)		33.1%	33.1%	17.7%	50.8%					49.2%	49.2%	49.2%
Maximum Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		0.5	0.5	1.0	0.5					0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0	4.5	4.0					4.0	4.0	4.0
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		None	None	None	None					Max	C-Max	C-Max
Walk Time (s)		5.0	5.0		5.0					5.0	5.0	5.0
Flash Don't Walk (s)		11.0	11.0		11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0					0	0	0
Act Effct Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
Actuated g/C Ratio		0.30	0.30	0.14	0.48					0.46	0.46	0.46
v/c Ratio		0.89	0.67	0.94	0.53					0.90	0.30	0.61
Control Delay (s/veh)		52.2	23.0	98.5	25.3					48.2	22.5	24.8
Queue Delay		0.0	0.0	0.0	1.3					0.0	0.0	0.0
Total Delay (s/veh)		52.2	23.0	98.5	26.6					48.2	22.5	24.8
LOS		D	C	F	C					D	C	C
Approach Delay (s/veh)		45.2			41.6						34.3	
Approach LOS		D			D						C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay (s/veh): 40.3		Intersection LOS: D	
Intersection Capacity Utilization 84.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 43: SH 288

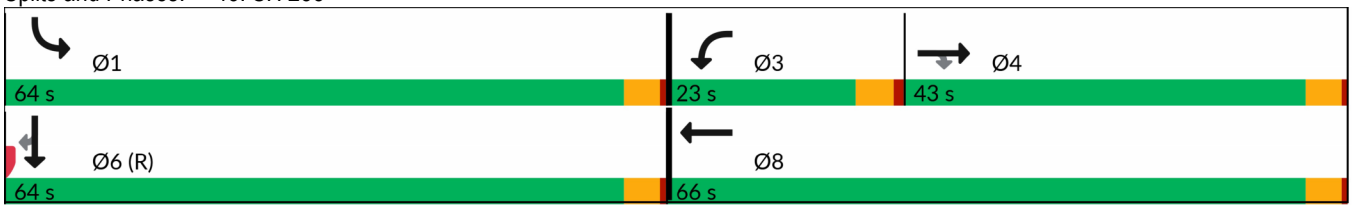


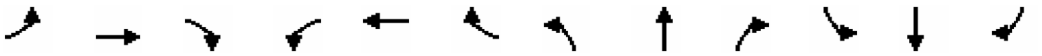
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	852	280	150	888	0	0	0	0	308	215	439
Future Volume (vph)	0	852	280	150	888	0	0	0	0	308	215	439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			248									73
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		807			505			209			785	
Travel Time (s)		18.3			11.5			4.8			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	926	304	163	965	0	0	0	0	335	234	477
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	926	304	163	965	0	0	0	0	335	234	477
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8					1	6	6
Switch Phase												
Minimum Initial (s)		4.0	4.0	5.0	4.0					4.0	4.0	4.0
Minimum Split (s)		20.0	20.0	9.5	20.0					20.0	20.0	20.0
Total Split (s)		43.0	43.0	23.0	66.0					64.0	64.0	64.0
Total Split (%)		33.1%	33.1%	17.7%	50.8%					49.2%	49.2%	49.2%
Maximum Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		0.5	0.5	1.0	0.5					0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0	4.5	4.0					4.0	4.0	4.0
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		None	None	None	None					Max	C-Max	C-Max
Walk Time (s)		5.0	5.0		5.0					5.0	5.0	5.0
Flash Don't Walk (s)		11.0	11.0		11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0					0	0	0
Act Effct Green (s)		34.1	34.1	16.0	54.6					67.4	67.4	67.4
Actuated g/C Ratio		0.26	0.26	0.12	0.42					0.52	0.52	0.52
v/c Ratio		0.69	0.51	0.75	0.65					0.37	0.13	0.56
Control Delay (s/veh)		45.9	11.2	75.9	31.8					21.5	17.7	22.1
Queue Delay		0.0	0.0	0.0	1.1					0.0	0.0	0.0
Total Delay (s/veh)		45.9	11.2	75.9	32.9					21.5	17.7	22.1
LOS		D	B	E	C					C	B	C
Approach Delay (s/veh)		37.3			39.1						20.9	
Approach LOS		D			D						C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay (s/veh): 32.9		Intersection LOS: C	
Intersection Capacity Utilization 58.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 43: SH 288



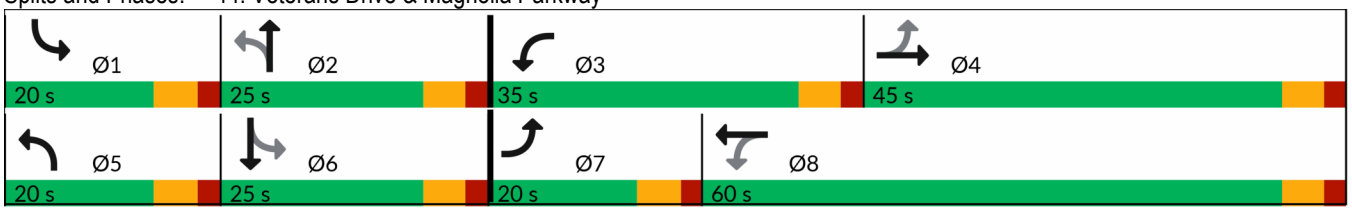


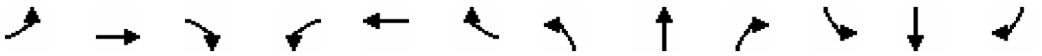
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	406	78	186	609	63	50	100	141	90	224	78
Future Volume (vph)	36	406	78	186	609	63	50	100	141	90	224	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	220		150	120		150	80		80
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.976			0.986			0.912			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3490	0	1770	3228	0	1770	3401	0
Flt Permitted	0.340			0.264			0.554			0.529		
Satd. Flow (perm)	633	3454	0	492	3490	0	1032	3228	0	985	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			11			153			33	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3334			4203			1951			5273	
Travel Time (s)		75.8			95.5			44.3			119.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	441	85	202	662	68	54	109	153	98	243	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	526	0	202	730	0	54	262	0	98	328	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0		3.0	7.0		10.0	5.0		10.0	5.0	
Minimum Split (s)	20.0	45.0		35.0	40.0		20.0	25.0		20.0	25.0	
Total Split (s)	20.0	45.0		35.0	60.0		20.0	25.0		20.0	25.0	
Total Split (%)	16.0%	36.0%		28.0%	48.0%		16.0%	20.0%		16.0%	20.0%	
Maximum Green (s)	14.0	39.0		29.0	54.0		14.0	19.0		14.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	25.4	18.7		35.9	29.0		27.1	19.6		29.0	23.2	
Actuated g/C Ratio	0.32	0.23		0.45	0.36		0.34	0.24		0.36	0.29	
v/c Ratio	0.13	0.65		0.51	0.58		0.12	0.29		0.21	0.33	
Control Delay (s/veh)	15.1	31.8		19.1	24.9		17.7	13.8		18.4	24.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.1	31.8		19.1	24.9		17.7	13.8		18.4	24.7	
LOS	B	C		B	C		B	B		B	C	
Approach Delay (s/veh)		30.7			23.7			14.5			23.2	
Approach LOS		C			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 80.5			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay (s/veh): 24.0		Intersection LOS: C	
Intersection Capacity Utilization 60.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 44: Veterans Drive & Magnoila Parkway



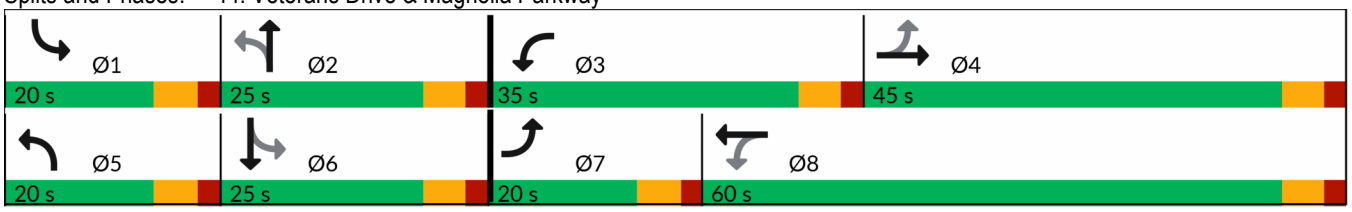


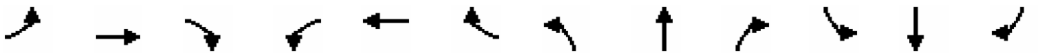
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	532	84	114	306	73	123	157	242	81	86	50
Future Volume (vph)	42	532	84	114	306	73	123	157	242	81	86	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	220		150	120		150	80		80
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.980			0.971			0.909			0.945	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3437	0	1770	3217	0	1770	3345	0
Flt Permitted	0.510			0.219			0.551			0.489		
Satd. Flow (perm)	950	3468	0	408	3437	0	1026	3217	0	911	3345	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			29			263			54	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3334			4203			1951			5273	
Travel Time (s)		75.8			95.5			44.3			119.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	46	578	91	124	333	79	134	171	263	88	93	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	669	0	124	412	0	134	434	0	88	147	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0		3.0	7.0		10.0	5.0		10.0	5.0	
Minimum Split (s)	20.0	45.0		35.0	40.0		20.0	25.0		20.0	25.0	
Total Split (s)	20.0	45.0		35.0	60.0		20.0	25.0		20.0	25.0	
Total Split (%)	16.0%	36.0%		28.0%	48.0%		16.0%	20.0%		16.0%	20.0%	
Maximum Green (s)	14.0	39.0		29.0	54.0		14.0	19.0		14.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	29.7	22.7		35.9	30.3		28.7	20.1		25.7	15.2	
Actuated g/C Ratio	0.36	0.27		0.43	0.37		0.35	0.24		0.31	0.18	
v/c Ratio	0.11	0.69		0.38	0.32		0.29	0.44		0.22	0.22	
Control Delay (s/veh)	14.1	31.0		17.3	20.3		19.7	13.6		19.3	20.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	14.1	31.0		17.3	20.3		19.7	13.6		19.3	20.9	
LOS	B	C		B	C		B	B		B	C	
Approach Delay (s/veh)		30.0			19.6			15.1			20.3	
Approach LOS		C			B			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 82.6			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 22.0		Intersection LOS: C	
Intersection Capacity Utilization 60.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 44: Veterans Drive & Magnoila Parkway



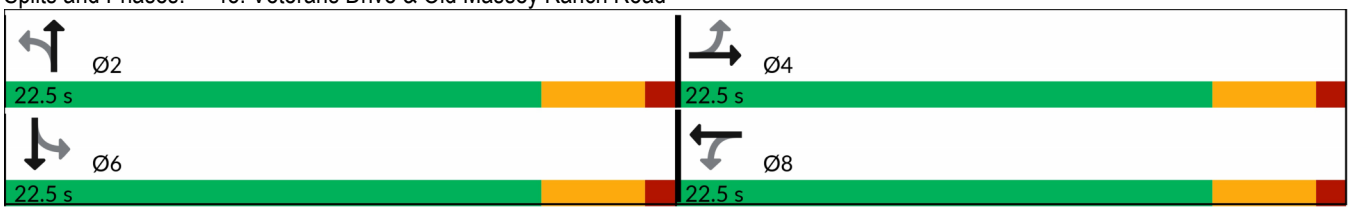


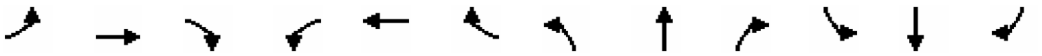
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	3	116	1	1	1	67	186	1	3	315	20
Future Volume (vph)	27	3	116	1	1	1	67	186	1	3	315	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.853			0.925			0.999			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3019	0	1770	3274	0	1770	3536	0	1770	3507	0
Flt Permitted							0.535			0.624		
Satd. Flow (perm)	1863	3019	0	1863	3274	0	997	3536	0	1162	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		361			571			1			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1272			1116			5316			5367	
Travel Time (s)		28.9			25.4			120.8			122.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	3	126	1	1	1	73	202	1	3	342	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	129	0	1	2	0	73	203	0	3	364	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	6.1	6.1		6.1	6.1		16.1	16.1		16.1	16.1	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.63	0.63		0.63	0.63	
v/c Ratio	0.07	0.13		0.00	0.00		0.12	0.09		0.00	0.16	
Control Delay (s/veh)	7.5	0.3		7.0	0.0		5.5	4.5		5.0	4.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	7.5	0.3		7.0	0.0		5.5	4.5		5.0	4.3	
LOS	A	A		A	A		A	A		A	A	
Approach Delay (s/veh)		1.6			2.3			4.7			4.3	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 25.4			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.16			
Intersection Signal Delay (s/veh): 3.9		Intersection LOS: A	
Intersection Capacity Utilization 32.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 45: Veterans Drive & Old Massey Ranch Road



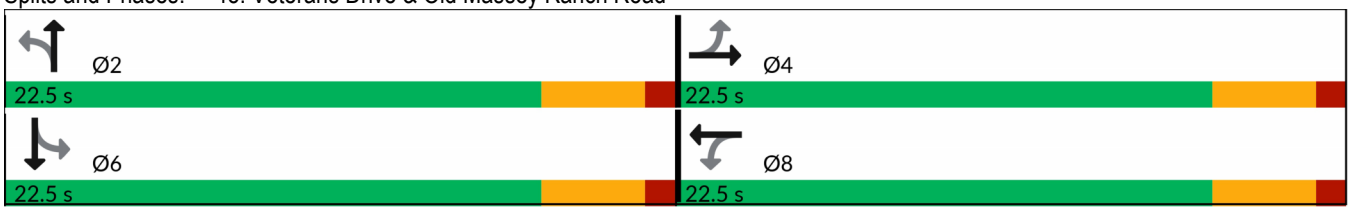


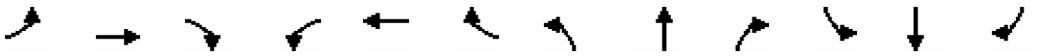
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	0	64	1	100	2	101	231	1	4	93	15
Future Volume (vph)	22	0	64	1	100	2	101	231	1	4	93	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.850			0.997			0.999			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3008	0	1770	3529	0	1770	3536	0	1770	3465	0
Flt Permitted							0.678			0.596		
Satd. Flow (perm)	1863	3008	0	1863	3529	0	1263	3536	0	1110	3465	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		791			2			1			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1272			1116			5316			5367	
Travel Time (s)		28.9			25.4			120.8			122.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	0	70	1	109	2	110	251	1	4	101	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	70	0	1	111	0	110	252	0	4	117	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	6.2	6.2		6.4	6.4		18.1	18.1		18.1	18.1	
Actuated g/C Ratio	0.26	0.26		0.27	0.27		0.76	0.76		0.76	0.76	
v/c Ratio	0.05	0.05		0.00	0.12		0.11	0.09		0.00	0.04	
Control Delay (s/veh)	7.1	0.1		7.0	7.0		4.3	3.4		4.5	3.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	7.1	0.1		7.0	7.0		4.3	3.4		4.5	3.3	
LOS	A	A		A	A		A	A		A	A	
Approach Delay (s/veh)		1.9			7.0			3.6			3.3	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 23.9			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.12			
Intersection Signal Delay (s/veh): 3.9		Intersection LOS: A	
Intersection Capacity Utilization 27.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 45: Veterans Drive & Old Massey Ranch Road



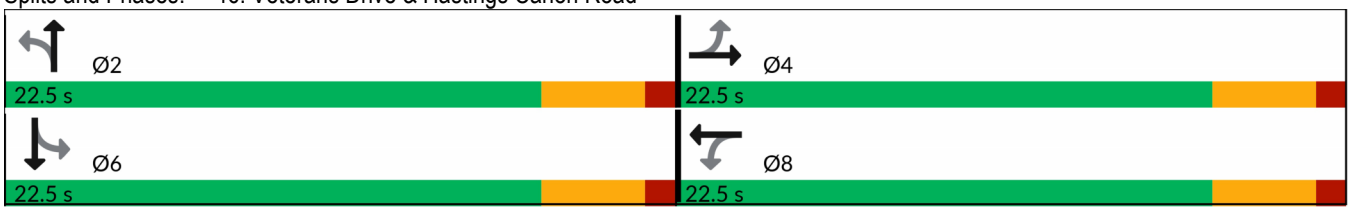


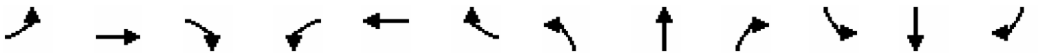
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	10	8	80	11	76	10	127	73	114	226	28
Future Volume (vph)	13	10	8	80	11	76	10	127	73	114	226	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.932			0.869			0.945			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3299	0	1770	3076	0	1770	3345	0	1770	3483	0
Flt Permitted	0.692			0.744			0.582			0.616		
Satd. Flow (perm)	1289	3299	0	1386	3076	0	1084	3345	0	1147	3483	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			83			79			30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1459			1916			1299			5316	
Travel Time (s)		33.2			43.5			29.5			120.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	11	9	87	12	83	11	138	79	124	246	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	20	0	87	95	0	11	217	0	124	276	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	7.5	7.5		7.5	7.5		15.9	15.9		15.9	15.9	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.54	0.54		0.54	0.54	
v/c Ratio	0.04	0.02		0.25	0.11		0.02	0.12		0.20	0.14	
Control Delay (s/veh)	7.8	6.0		10.2	3.4		5.7	3.9		6.9	5.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	7.8	6.0		10.2	3.4		5.7	3.9		6.9	5.0	
LOS	A	A		B	A		A	A		A	A	
Approach Delay (s/veh)		6.7			6.6			4.0			5.6	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 29.2			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.25			
Intersection Signal Delay (s/veh): 5.4		Intersection LOS: A	
Intersection Capacity Utilization 34.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 46: Veterans Drive & Hastings Canon Road



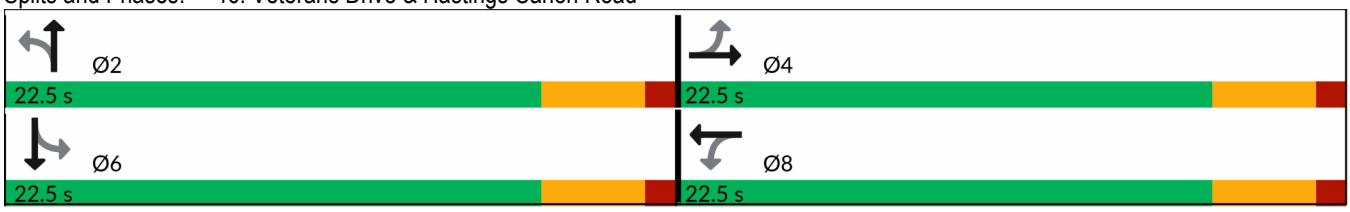


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	10	22	63	9	106	7	202	85	66	83	4
Future Volume (vph)	22	10	22	63	9	106	7	202	85	66	83	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.897			0.862			0.956			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3175	0	1770	3051	0	1770	3383	0	1770	3518	0
Flt Permitted	0.702			0.733			0.693			0.562		
Satd. Flow (perm)	1308	3175	0	1365	3051	0	1291	3383	0	1047	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			115			92			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1459			1916			1299			5316	
Travel Time (s)		33.2			43.5			29.5			120.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	11	24	68	10	115	8	220	92	72	90	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	35	0	68	125	0	8	312	0	72	94	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	6.9	6.9		6.9	6.9		13.2	13.2		13.2	13.2	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.50	0.50		0.50	0.50	
v/c Ratio	0.07	0.04		0.19	0.14		0.01	0.18		0.14	0.05	
Control Delay (s/veh)	6.8	4.1		8.2	2.6		5.7	4.3		6.7	5.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	6.8	4.1		8.2	2.6		5.7	4.3		6.7	5.5	
LOS	A	A		A	A		A	A		A	A	
Approach Delay (s/veh)		5.2			4.5			4.4			6.0	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 26.2			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.19			
Intersection Signal Delay (s/veh): 4.9		Intersection LOS: A	
Intersection Capacity Utilization 33.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 46: Veterans Drive & Hastings Canon Road



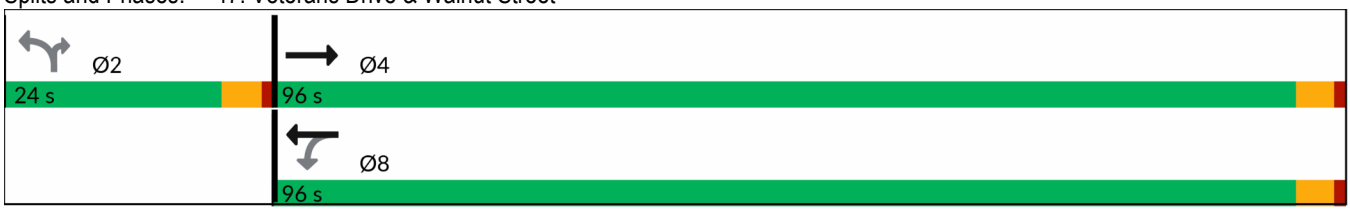


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	267	151	350	180	52	182
Future Volume (vph)	267	151	350	180	52	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		120	150		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			0		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.946					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3348	0	1770	3539	1770	1583
Flt Permitted			0.490		0.950	
Satd. Flow (perm)	3348	0	913	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	164					198
Link Speed (mph)	30			30	30	
Link Distance (ft)	601			563	5273	
Travel Time (s)	13.7			12.8	119.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	290	164	380	196	57	198
Shared Lane Traffic (%)						
Lane Group Flow (vph)	454	0	380	196	57	198
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases			8		2	2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	96.0		96.0	96.0	24.0	24.0
Total Split (%)	80.0%		80.0%	80.0%	20.0%	20.0%
Maximum Green (s)	91.5		91.5	91.5	19.5	19.5
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Min	Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Don't Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effct Green (s)	22.7		22.7	22.7	7.4	7.4
Actuated g/C Ratio	0.57		0.57	0.57	0.19	0.19
v/c Ratio	0.23		0.73	0.10	0.17	0.44
Control Delay (s/veh)	2.6		15.3	3.6	18.9	7.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	2.6		15.3	3.6	18.9	7.5
LOS	A		B	A	B	A
Approach Delay (s/veh)	2.6			11.3	10.1	
Approach LOS	A			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 39.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 8.0		Intersection LOS: A	
Intersection Capacity Utilization 47.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 47: Veterans Drive & Walnut Street

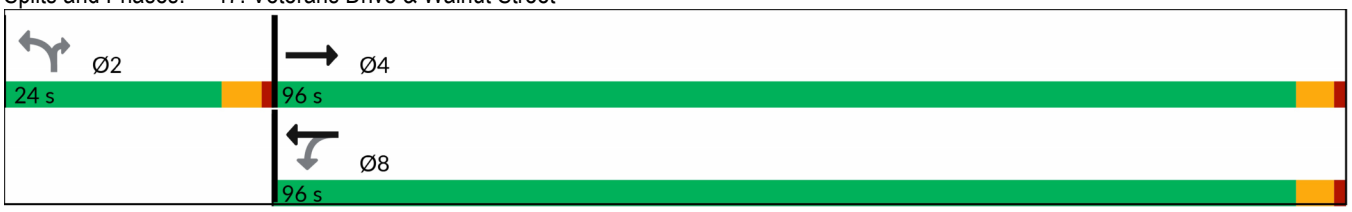


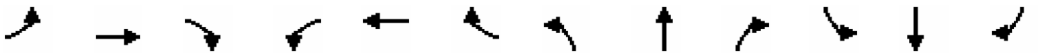
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	255	39	109	122	126	266
Future Volume (vph)	255	39	109	122	126	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		120	150		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			0		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.980					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3468	0	1770	3539	1770	1583
Flt Permitted			0.558		0.950	
Satd. Flow (perm)	3468	0	1039	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	42					289
Link Speed (mph)	30			30	30	
Link Distance (ft)	601			563	5273	
Travel Time (s)	13.7			12.8	119.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	277	42	118	133	137	289
Shared Lane Traffic (%)						
Lane Group Flow (vph)	319	0	118	133	137	289
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases			8		2	2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	96.0		96.0	96.0	24.0	24.0
Total Split (%)	80.0%		80.0%	80.0%	20.0%	20.0%
Maximum Green (s)	91.5		91.5	91.5	19.5	19.5
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Min	Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Don't Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effct Green (s)	9.0		9.0	9.0	7.3	7.3
Actuated g/C Ratio	0.35		0.35	0.35	0.29	0.29
v/c Ratio	0.26		0.32	0.11	0.27	0.44
Control Delay (s/veh)	5.6		8.7	5.7	9.2	3.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.6		8.7	5.7	9.2	3.8
LOS	A		A	A	A	A
Approach Delay (s/veh)	5.6			7.1	5.5	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 25.4			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay (s/veh): 6.0		Intersection LOS: A	
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 47: Veterans Drive & Walnut Street



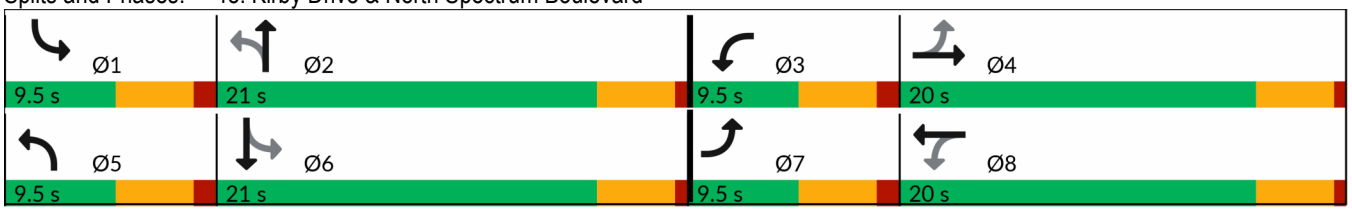


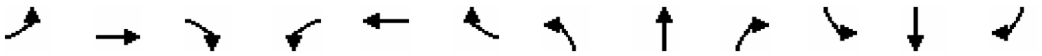
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	2	91	0	1	13	31	647	2	0	558	123
Future Volume (vph)	140	2	91	0	1	13	31	647	2	0	558	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	60		0	120		150	120		150	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.853			0.860						0.973	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1770	3019	0	1863	3044	0	1770	3539	0	1863	3444	0
Flt Permitted	0.755						0.273					
Satd. Flow (perm)	1406	3019	0	1863	3044	0	509	3539	0	1863	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		443			329						44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1082			1201			1142			806	
Travel Time (s)		24.6			27.3			26.0			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	152	2	99	0	1	14	34	703	2	0	607	134
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	101	0	0	15	0	34	705	0	0	741	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		17			17			32			32	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		9.5	20.0		9.5	21.0		9.5	21.0	
Total Split (%)	15.8%	33.3%		15.8%	33.3%		15.8%	35.0%		15.8%	35.0%	
Maximum Green (s)	5.0	16.0		5.0	16.0		5.0	17.0		5.0	17.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.5	7.1			5.7		22.3	23.6			22.2	
Actuated g/C Ratio	0.18	0.20			0.16		0.62	0.65			0.61	
v/c Ratio	0.50	0.11			0.02		0.07	0.31			0.35	
Control Delay (s/veh)	18.9	0.2			0.1		4.8	4.7			6.6	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay (s/veh)	18.9	0.2			0.1		4.8	4.7			6.6	
LOS	B	A			A		A	A			A	
Approach Delay (s/veh)		11.4			0.1			4.7			6.6	
Approach LOS		B			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 36.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay (s/veh): 6.4		Intersection LOS: A	
Intersection Capacity Utilization 46.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 48: Kirby Drive & North Spectrum Boulevard



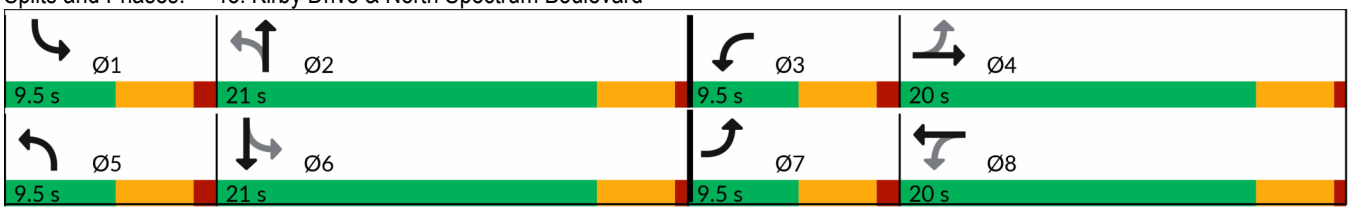


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	31	0	0	1	58	673	0	6	487	119
Future Volume (vph)	13	0	31	0	0	1	58	673	0	6	487	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	60		0	120		150	120		150	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.850			0.850						0.971	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1770	3008	0	1863	3008	0	1770	3539	0	1770	3437	0
Flt Permitted	0.755						0.369			0.374		
Satd. Flow (perm)	1406	3008	0	1863	3008	0	687	3539	0	697	3437	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		461			413						50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1082			1201			1142			806	
Travel Time (s)		24.6			27.3			26.0			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	0	34	0	0	1	63	732	0	7	529	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	34	0	0	1	0	63	732	0	7	658	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		17			17			32			32	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		9.5	20.0		9.5	21.0		9.5	21.0	
Total Split (%)	15.8%	33.3%		15.8%	33.3%		15.8%	35.0%		15.8%	35.0%	
Maximum Green (s)	5.0	16.0		5.0	16.0		5.0	17.0		5.0	17.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.6	7.1			5.7		28.8	32.1		27.6	28.5	
Actuated g/C Ratio	0.18	0.19			0.15		0.78	0.87		0.75	0.77	
v/c Ratio	0.05	0.04			0.00		0.09	0.24		0.01	0.25	
Control Delay (s/veh)	12.1	0.1			0.0		3.3	4.4		3.7	5.1	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	12.1	0.1			0.0		3.3	4.4		3.7	5.1	
LOS	B	A			A		A	A		A	A	
Approach Delay (s/veh)		3.6						4.4			5.1	
Approach LOS		A						A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 37			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.25			
Intersection Signal Delay (s/veh): 4.6		Intersection LOS: A	
Intersection Capacity Utilization 40.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 48: Kirby Drive & North Spectrum Boulevard





Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	53	35	2	616	32	32	616
Future Volume (vph)	53	35	2	616	32	32	616
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	150		150	120	
Storage Lanes	0	0	1		0	1	
Taper Length (ft)	25		25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850		0.993			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	1583	1770	3514	0	1770	3539
Flt Permitted	0.950		0.950			0.374	
Satd. Flow (perm)	1770	1583	1770	3514	0	697	3539
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		38		11			
Link Speed (mph)	30			30			30
Link Distance (ft)	1050			764			1142
Travel Time (s)	23.9			17.4			26.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	58	38	2	670	35	35	670
Shared Lane Traffic (%)							
Lane Group Flow (vph)	58	38	2	705	0	35	670
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	R NA	Left	Right	Left	Left
Median Width(ft)	12			12			12
Link Offset(ft)	0			0			0
Crosswalk Width(ft)	16			16			16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9		9	15	
Number of Detectors	1	1	1	2		1	2
Detector Template	Left	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)				94			94
Detector 2 Size(ft)				6			6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Prot	NA		pm+pt	NA
Protected Phases	8		5	2		1	6
Permitted Phases		8				6	

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Detector Phase	8	8	5	2		1	6
Switch Phase							
Minimum Initial (s)	4.0	4.0	5.0	4.0		5.0	4.0
Minimum Split (s)	20.0	20.0	9.5	20.0		9.5	20.0
Total Split (s)	20.0	20.0	9.5	20.5		9.5	20.5
Total Split (%)	40.0%	40.0%	19.0%	41.0%		19.0%	41.0%
Maximum Green (s)	16.0	16.0	5.0	16.5		5.0	16.5
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	1.0	0.5		1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.0		4.5	4.0
Lead/Lag			Lead	Lag		Lead	Lag
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	Max		None	None
Walk Time (s)	5.0	5.0		5.0			5.0
Flash Don't Walk (s)	11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0		0			0
Act Effct Green (s)	6.8	6.8	5.0	27.2		25.9	27.2
Actuated g/C Ratio	0.18	0.18	0.13	0.72		0.68	0.72
v/c Ratio	0.18	0.12	0.01	0.28		0.06	0.26
Control Delay (s/veh)	14.9	6.9	15.5	5.2		3.8	5.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	14.9	6.9	15.5	5.2		3.8	5.2
LOS	B	A	B	A		A	A
Approach Delay (s/veh)	11.7			5.2			5.1
Approach LOS	B			A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 37.9			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay (s/veh): 5.6		Intersection LOS: A	
Intersection Capacity Utilization 36.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 49: Kirby Drive & South Spectrum Boulevard





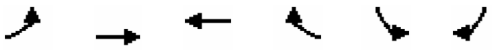
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	38	14	17	716	14	9	502
Future Volume (vph)	38	14	17	716	14	9	502
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	150		150	120	
Storage Lanes	0	0	1		0	1	
Taper Length (ft)	25		25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850		0.997			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	1583	1770	3529	0	1770	3539
Flt Permitted	0.950		0.950			0.341	
Satd. Flow (perm)	1770	1583	1770	3529	0	635	3539
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		15		4			
Link Speed (mph)	30			30			30
Link Distance (ft)	1050			764			1142
Travel Time (s)	23.9			17.4			26.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	15	18	778	15	10	546
Shared Lane Traffic (%)							
Lane Group Flow (vph)	41	15	18	793	0	10	546
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	R NA	Left	Right	Left	Left
Median Width(ft)	12			12			12
Link Offset(ft)	0			0			0
Crosswalk Width(ft)	16			16			16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9		9	15	
Number of Detectors	1	1	1	2		1	2
Detector Template	Left	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)				94			94
Detector 2 Size(ft)				6			6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Prot	NA		pm+pt	NA
Protected Phases	8		5	2		1	6
Permitted Phases		8				6	

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Detector Phase	8	8	5	2		1	6
Switch Phase							
Minimum Initial (s)	4.0	4.0	5.0	4.0		5.0	4.0
Minimum Split (s)	20.0	20.0	9.5	20.0		9.5	20.0
Total Split (s)	20.0	20.0	9.5	20.5		9.5	20.5
Total Split (%)	40.0%	40.0%	19.0%	41.0%		19.0%	41.0%
Maximum Green (s)	16.0	16.0	5.0	16.5		5.0	16.5
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	1.0	0.5		1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.0		4.5	4.0
Lead/Lag			Lead	Lag		Lead	Lag
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	Max		None	None
Walk Time (s)	5.0	5.0		5.0			5.0
Flash Don't Walk (s)	11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0		0			0
Act Effct Green (s)	6.4	6.4	5.0	30.0		27.8	30.0
Actuated g/C Ratio	0.17	0.17	0.13	0.80		0.74	0.80
v/c Ratio	0.14	0.05	0.08	0.28		0.02	0.19
Control Delay (s/veh)	14.8	8.6	16.4	4.4		3.1	4.0
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	14.8	8.6	16.4	4.4		3.1	4.0
LOS	B	A	B	A		A	A
Approach Delay (s/veh)	13.1			4.6			4.0
Approach LOS	B			A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 37.4			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay (s/veh): 4.7		Intersection LOS: A	
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 49: Kirby Drive & South Spectrum Boulevard



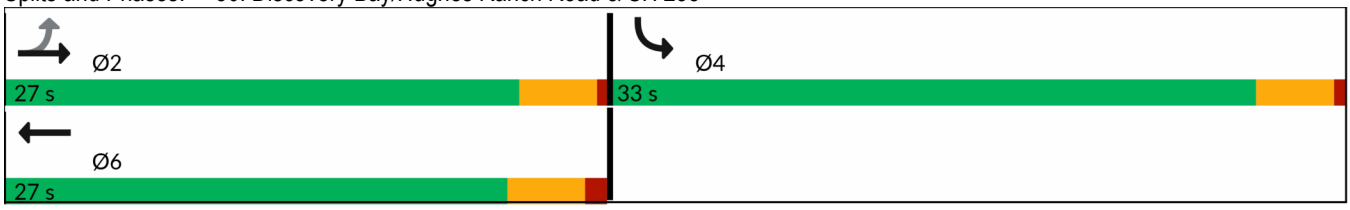


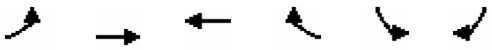
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	130	55	29	46	221	174
Future Volume (vph)	130	55	29	46	221	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	150	150
Storage Lanes	0			0	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.918		0.941	
Flt Protected		0.966			0.973	
Satd. Flow (prot)	0	1799	1710	0	1706	0
Flt Permitted		0.770			0.973	
Satd. Flow (perm)	0	1434	1710	0	1706	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			50		91	
Link Speed (mph)		30	30		30	
Link Distance (ft)		769	312		2088	
Travel Time (s)		17.5	7.1		47.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	60	32	50	240	189
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	201	82	0	429	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases	2					

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6		4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	5.0		4.0	
Minimum Split (s)	20.0	20.0	22.5		20.0	
Total Split (s)	27.0	27.0	27.0		33.0	
Total Split (%)	45.0%	45.0%	45.0%		55.0%	
Maximum Green (s)	23.0	23.0	22.5		29.0	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	1.0		0.5	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.0	4.5		4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	Max		None	
Walk Time (s)	5.0	5.0	7.0		5.0	
Flash Don't Walk (s)	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0		0	
Act Effct Green (s)		23.2	22.7		14.5	
Actuated g/C Ratio		0.51	0.50		0.32	
v/c Ratio		0.28	0.09		0.71	
Control Delay (s/veh)		9.4	4.8		17.6	
Queue Delay		0.0	0.0		0.0	
Total Delay (s/veh)		9.4	4.8		17.6	
LOS		A	A		B	
Approach Delay (s/veh)		9.4	4.8		17.6	
Approach LOS		A	A		B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 45.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay (s/veh): 13.8		Intersection LOS: B	
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 50: Discovery Bay/Hughes Ranch Road & SH 288



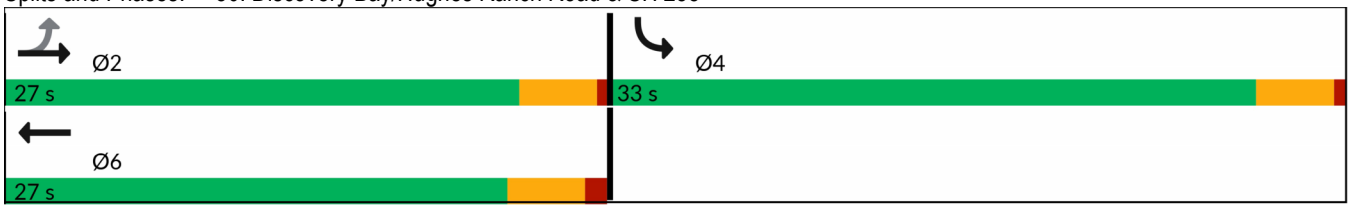


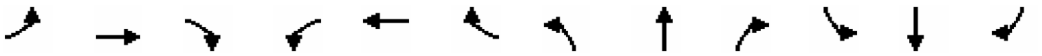
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	345	16	13	201	35	19
Future Volume (vph)	345	16	13	201	35	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	150	150
Storage Lanes	0			0	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.873		0.952	
Flt Protected		0.954			0.969	
Satd. Flow (prot)	0	1777	1626	0	1718	0
Flt Permitted		0.581			0.969	
Satd. Flow (perm)	0	1082	1626	0	1718	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			218		21	
Link Speed (mph)		30	30		30	
Link Distance (ft)		769	312		2088	
Travel Time (s)		17.5	7.1		47.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	375	17	14	218	38	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	392	232	0	59	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Detector 1 Position(ft)	0	0	0		0	
Detector 1 Size(ft)	20	6	6		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases	2					

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6		4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	5.0		4.0	
Minimum Split (s)	20.0	20.0	22.5		20.0	
Total Split (s)	27.0	27.0	27.0		33.0	
Total Split (%)	45.0%	45.0%	45.0%		55.0%	
Maximum Green (s)	23.0	23.0	22.5		29.0	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	1.0		0.5	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.0	4.5		4.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	None	Max		None	
Walk Time (s)	5.0	5.0	7.0		5.0	
Flash Don't Walk (s)	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0		0	
Act Effct Green (s)		39.4	39.2		6.7	
Actuated g/C Ratio		0.87	0.87		0.15	
v/c Ratio		0.42	0.16		0.22	
Control Delay (s/veh)		4.5	1.0		14.9	
Queue Delay		0.0	0.0		0.0	
Total Delay (s/veh)		4.5	1.0		14.9	
LOS		A	A		B	
Approach Delay (s/veh)		4.5	1.0		14.9	
Approach LOS		A	A		B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 45.2			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay (s/veh): 4.2		Intersection LOS: A	
Intersection Capacity Utilization 46.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 50: Discovery Bay/Hughes Ranch Road & SH 288



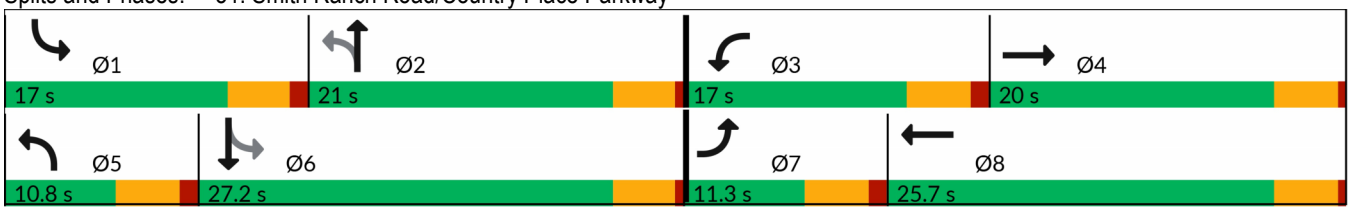


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	298	3	146	238	58	69	110	102	242	268	14
Future Volume (vph)	38	298	3	146	238	58	69	110	102	242	268	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	220		150	150		40	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.999			0.971			0.928			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3536	0	1770	3437	0	1770	3284	0	1770	3514	0
Flt Permitted	0.950			0.950			0.565			0.491		
Satd. Flow (perm)	1770	3536	0	1770	3437	0	1052	3284	0	915	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			40			111			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		215			3362			510			402	
Travel Time (s)		4.9			76.4			11.6			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	324	3	159	259	63	75	120	111	263	291	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	327	0	159	322	0	75	231	0	263	306	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	11.3	20.0		17.0	25.7		10.8	21.0		17.0	27.2	
Total Split (%)	15.1%	26.7%		22.7%	34.3%		14.4%	28.0%		22.7%	36.3%	
Maximum Green (s)	6.8	16.0		12.5	21.7		6.3	17.0		12.5	23.2	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.5	11.7		10.5	17.4		23.3	17.6		32.3	25.0	
Actuated g/C Ratio	0.10	0.18		0.16	0.27		0.36	0.27		0.50	0.39	
v/c Ratio	0.23	0.51		0.56	0.34		0.17	0.24		0.44	0.23	
Control Delay (s/veh)	33.9	28.4		35.5	18.5		12.7	12.8		14.3	17.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	33.9	28.4		35.5	18.5		12.7	12.8		14.3	17.3	
LOS	C	C		D	B		B	B		B	B	
Approach Delay (s/veh)		29.0			24.1			12.8			15.9	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 64.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 20.4		Intersection LOS: C	
Intersection Capacity Utilization 49.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 51: Smith Ranch Road/Country Place Parkway

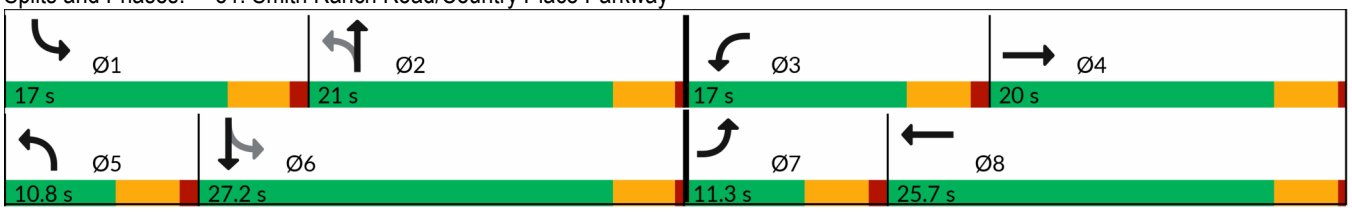


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	74	3	86	350	43	38	50	29	124	133	57
Future Volume (vph)	12	74	3	86	350	43	38	50	29	124	133	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	220		150	150		40	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.995			0.983			0.944			0.955	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3522	0	1770	3479	0	1770	3341	0	1770	3380	0
Flt Permitted	0.950			0.950			0.622			0.577		
Satd. Flow (perm)	1770	3522	0	1770	3479	0	1159	3341	0	1075	3380	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			18			32			62	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		215			3362			510			402	
Travel Time (s)		4.9			76.4			11.6			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	80	3	93	380	47	41	54	32	135	145	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	83	0	93	427	0	41	86	0	135	207	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	11.3	20.0		17.0	25.7		10.8	21.0		17.0	27.2	
Total Split (%)	15.1%	26.7%		22.7%	34.3%		14.4%	28.0%		22.7%	36.3%	
Maximum Green (s)	6.8	16.0		12.5	21.7		6.3	17.0		12.5	23.2	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.3	8.3		8.7	16.6		22.1	18.2		26.9	24.1	
Actuated g/C Ratio	0.12	0.15		0.16	0.30		0.40	0.33		0.49	0.44	
v/c Ratio	0.06	0.15		0.33	0.40		0.08	0.08		0.21	0.14	
Control Delay (s/veh)	27.3	23.7		27.0	16.9		9.7	12.6		10.0	9.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	27.3	23.7		27.0	16.9		9.7	12.6		10.0	9.7	
LOS	C	C		C	B		A	B		B	A	
Approach Delay (s/veh)		24.2			18.7			11.6			9.9	
Approach LOS		C			B			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 54.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay (s/veh): 15.6		Intersection LOS: B	
Intersection Capacity Utilization 31.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 51: Smith Ranch Road/Country Place Parkway



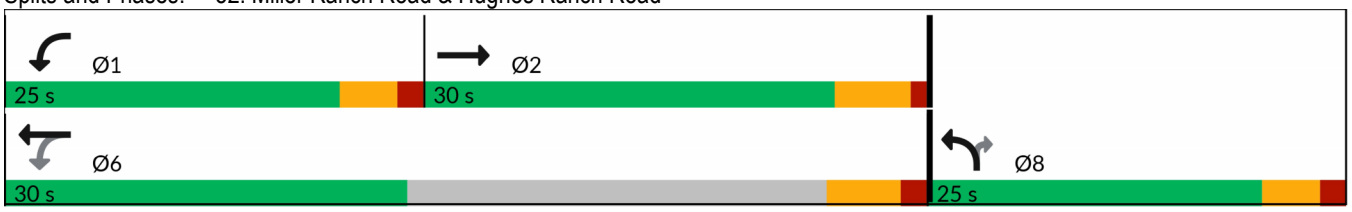


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	320	254	133	241	162	92
Future Volume (vph)	320	254	133	241	162	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	120		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.934					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3306	0	1770	3539	1770	1583
Flt Permitted			0.215		0.950	
Satd. Flow (perm)	3306	0	400	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	259					100
Link Speed (mph)	30			30	30	
Link Distance (ft)	3362			2489	974	
Travel Time (s)	76.4			56.6	22.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	348	276	145	262	176	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	624	0	145	262	176	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	11.0		4.0	11.0	5.0	5.0
Minimum Split (s)	25.0		20.0	25.0	21.0	21.0
Total Split (s)	30.0		25.0	30.0	25.0	25.0
Total Split (%)	37.5%		31.3%	37.5%	31.3%	31.3%
Maximum Green (s)	24.5		20.0	24.0	20.0	20.0
Yellow Time (s)	4.5		3.5	4.5	3.5	3.5
All-Red Time (s)	1.0		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Max	Max
Walk Time (s)	7.0			5.0	5.0	5.0
Flash Don't Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	14.1		24.9	23.9	20.5	20.5
Actuated g/C Ratio	0.25		0.45	0.43	0.37	0.37
v/c Ratio	0.61		0.38	0.17	0.27	0.16
Control Delay (s/veh)	13.7		11.3	9.2	16.5	4.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.7		11.3	9.2	16.5	4.9
LOS	B		B	A	B	A
Approach Delay (s/veh)	13.7			9.9	12.3	
Approach LOS	B			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 55.6			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay (s/veh): 12.2		Intersection LOS: B	
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 52: Miller Ranch Road & Hughes Ranch Road

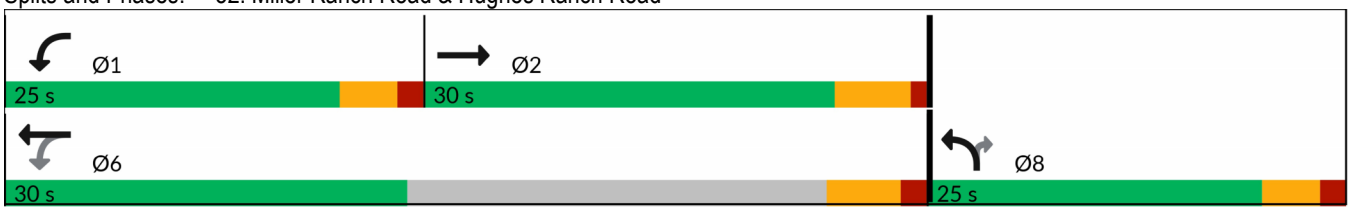


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	259	90	126	291	150	225
Future Volume (vph)	259	90	126	291	150	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	120		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.961					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3401	0	1770	3539	1770	1583
Flt Permitted			0.367		0.950	
Satd. Flow (perm)	3401	0	684	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	62					245
Link Speed (mph)	30			30	30	
Link Distance (ft)	3362			2489	974	
Travel Time (s)	76.4			56.6	22.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	282	98	137	316	163	245
Shared Lane Traffic (%)						
Lane Group Flow (vph)	380	0	137	316	163	245
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	11.0		4.0	11.0	5.0	5.0
Minimum Split (s)	25.0		20.0	25.0	21.0	21.0
Total Split (s)	30.0		25.0	30.0	25.0	25.0
Total Split (%)	37.5%		31.3%	37.5%	31.3%	31.3%
Maximum Green (s)	24.5		20.0	24.0	20.0	20.0
Yellow Time (s)	4.5		3.5	4.5	3.5	3.5
All-Red Time (s)	1.0		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Max	Max
Walk Time (s)	7.0			5.0	5.0	5.0
Flash Don't Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	12.1		22.8	21.8	20.3	20.3
Actuated g/C Ratio	0.23		0.43	0.41	0.38	0.38
v/c Ratio	0.47		0.30	0.22	0.24	0.32
Control Delay (s/veh)	17.9		10.5	10.0	14.4	3.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	17.9		10.5	10.0	14.4	3.8
LOS	B		B	B	B	A
Approach Delay (s/veh)	17.9			10.2	8.0	
Approach LOS	B			B	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 53.3			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay (s/veh): 11.8		Intersection LOS: B	
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 52: Miller Ranch Road & Hughes Ranch Road



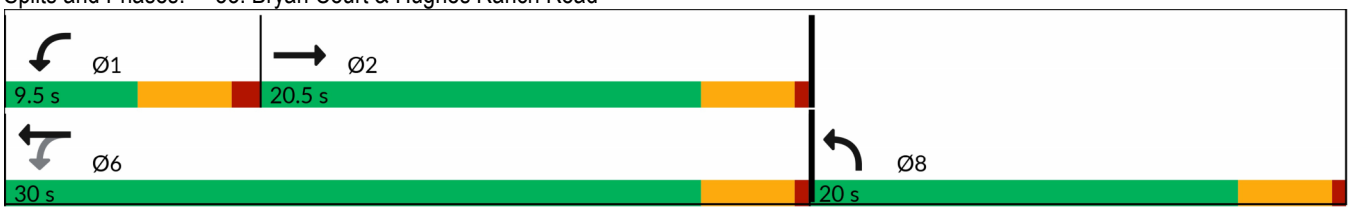


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	429	2	2	376	0	3
Future Volume (vph)	429	2	2	376	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	80		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.999				0.865	
Flt Protected			0.950			
Satd. Flow (prot)	3536	0	1770	3539	1611	0
Flt Permitted			0.424			
Satd. Flow (perm)	3536	0	790	3539	1611	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	1				385	
Link Speed (mph)	30			30	30	
Link Distance (ft)	2489			1502	641	
Travel Time (s)	56.6			34.1	14.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	466	2	2	409	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	468	0	2	409	3	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	4.0		5.0	4.0	4.0	
Minimum Split (s)	20.0		9.5	20.0	20.0	
Total Split (s)	20.5		9.5	30.0	20.0	
Total Split (%)	41.0%		19.0%	60.0%	40.0%	
Maximum Green (s)	16.5		5.0	26.0	16.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.5	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	None	None	
Walk Time (s)	5.0			5.0	5.0	
Flash Don't Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	36.0		33.3	37.4	5.7	
Actuated g/C Ratio	0.92		0.85	0.95	0.15	
v/c Ratio	0.14		0.00	0.12	0.01	
Control Delay (s/veh)	1.9		1.5	0.7	0.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	1.9		1.5	0.7	0.0	
LOS	A		A	A	A	
Approach Delay (s/veh)	1.9			0.7		
Approach LOS	A			A		

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 39.3			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.14			
Intersection Signal Delay (s/veh): 1.3		Intersection LOS: A	
Intersection Capacity Utilization 21.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 53: Bryan Court & Hughes Ranch Road



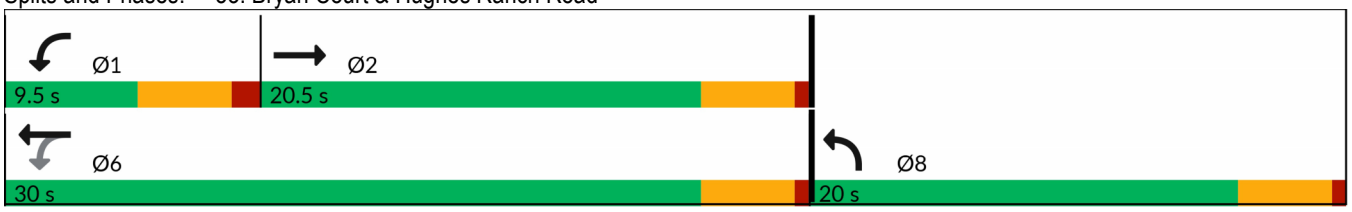


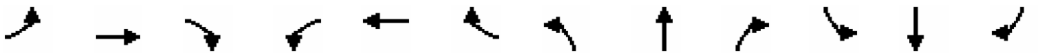
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	362	180	95	300	151	93
Future Volume (vph)	362	180	95	300	151	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	80		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.950				0.949	
Flt Protected			0.950		0.970	
Satd. Flow (prot)	3362	0	1770	3539	1715	0
Flt Permitted			0.326		0.970	
Satd. Flow (perm)	3362	0	607	3539	1715	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	185				65	
Link Speed (mph)	30			30	30	
Link Distance (ft)	2489			1502	641	
Travel Time (s)	56.6			34.1	14.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	393	196	103	326	164	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	589	0	103	326	265	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	4.0		5.0	4.0	4.0	
Minimum Split (s)	20.0		9.5	20.0	20.0	
Total Split (s)	20.5		9.5	30.0	20.0	
Total Split (%)	41.0%		19.0%	60.0%	40.0%	
Maximum Green (s)	16.5		5.0	26.0	16.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.5	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	Max		None	None	None	
Walk Time (s)	5.0			5.0	5.0	
Flash Don't Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	20.0		24.9	25.4	10.7	
Actuated g/C Ratio	0.45		0.56	0.57	0.24	
v/c Ratio	0.36		0.22	0.16	0.57	
Control Delay (s/veh)	7.8		6.7	5.3	15.9	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	7.8		6.7	5.3	15.9	
LOS	A		A	A	B	
Approach Delay (s/veh)	7.8			5.6	15.9	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 44.2			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay (s/veh): 8.8		Intersection LOS: A	
Intersection Capacity Utilization 45.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 53: Bryan Court & Hughes Ranch Road



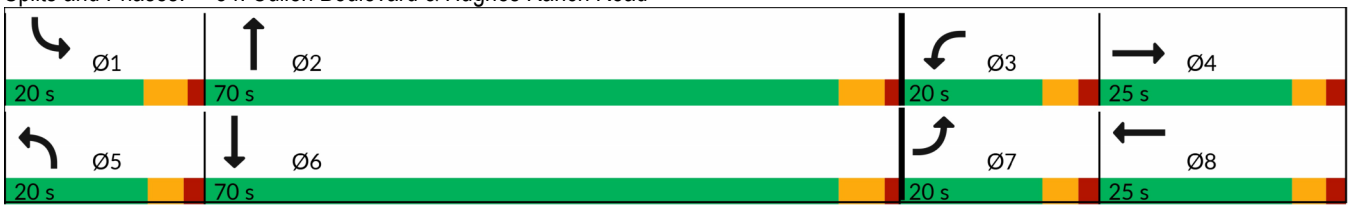


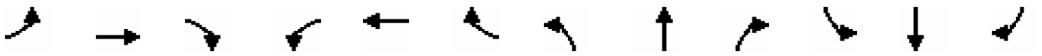
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	89	183	23	90	49	135	703	36	48	1047	111
Future Volume (vph)	74	89	183	23	90	49	135	703	36	48	1047	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		150	80		150	330		150	330		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.98											
Frt		0.899			0.947			0.993			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3182	0	1770	3352	0	1770	3514	0	1770	3490	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1737	3182	0	1770	3352	0	1770	3514	0	1770	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		199			53			5			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3319			5457			763			632	
Travel Time (s)		75.4			124.0			17.3			14.4	
Confl. Peds. (#/hr)	9											
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	80	97	199	25	98	53	147	764	39	52	1138	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	296	0	25	151	0	147	803	0	52	1259	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Minimum Split (s)	20.0	25.0		20.0	25.0		20.0	45.0		20.0	45.0	
Total Split (s)	20.0	25.0		20.0	25.0		20.0	70.0		20.0	70.0	
Total Split (%)	14.8%	18.5%		14.8%	18.5%		14.8%	51.9%		14.8%	51.9%	
Maximum Green (s)	14.5	19.5		14.5	19.5		14.5	64.0		14.0	64.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	10.4	14.0		7.2	8.8		13.2	65.9		8.8	58.8	
Actuated g/C Ratio	0.09	0.13		0.06	0.08		0.12	0.59		0.08	0.53	
v/c Ratio	0.48	0.51		0.22	0.48		0.70	0.38		0.37	0.68	
Control Delay (s/veh)	61.3	20.1		58.4	39.2		68.1	15.2		60.1	22.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	61.3	20.1		58.4	39.2		68.1	15.2		60.1	22.9	
LOS	E	C		E	D		E	B		E	C	
Approach Delay (s/veh)		28.9			42.0			23.3			24.4	
Approach LOS		C			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 111			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 25.7		Intersection LOS: C	
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 54: Cullen Boulevard & Hughes Ranch Road



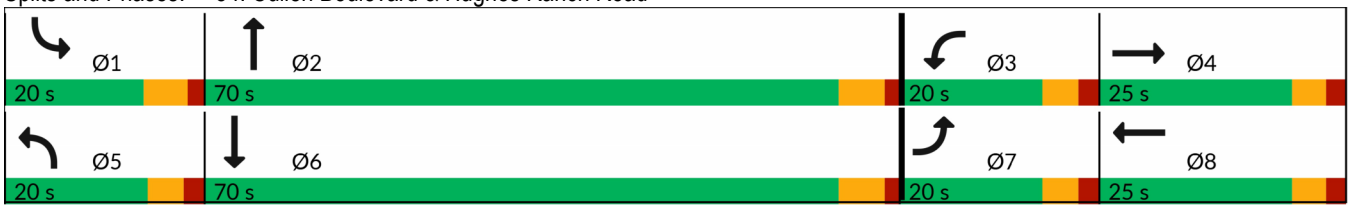


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	51	127	19	91	83	148	800	13	57	588	68
Future Volume (vph)	121	51	127	19	91	83	148	800	13	57	588	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		150	80		150	330		150	330		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.98											
Frt		0.893			0.929			0.998			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3161	0	1770	3288	0	1770	3532	0	1770	3483	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1739	3161	0	1770	3288	0	1770	3532	0	1770	3483	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		138			90			2			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3319			5457			763			632	
Travel Time (s)		75.4			124.0			17.3			14.4	
Confl. Peds. (#/hr)	9											
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	132	55	138	21	99	90	161	870	14	62	639	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	193	0	21	189	0	161	884	0	62	713	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Minimum Split (s)	20.0	25.0		20.0	25.0		20.0	45.0		20.0	45.0	
Total Split (s)	20.0	25.0		20.0	25.0		20.0	70.0		20.0	70.0	
Total Split (%)	14.8%	18.5%		14.8%	18.5%		14.8%	51.9%		14.8%	51.9%	
Maximum Green (s)	14.5	19.5		14.5	19.5		14.5	64.0		14.0	64.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Don't Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	12.8	22.2		7.0	9.0		13.8	64.7		9.5	58.0	
Actuated g/C Ratio	0.11	0.19		0.06	0.08		0.12	0.56		0.08	0.50	
v/c Ratio	0.68	0.27		0.20	0.56		0.77	0.45		0.43	0.41	
Control Delay (s/veh)	69.8	15.9		59.6	34.8		75.4	17.8		62.6	19.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	69.8	15.9		59.6	34.8		75.4	17.8		62.6	19.3	
LOS	E	B		E	C		E	B		E	B	
Approach Delay (s/veh)		37.8			37.3			26.7			22.8	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 116.3			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 27.9		Intersection LOS: C	
Intersection Capacity Utilization 57.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 54: Cullen Boulevard & Hughes Ranch Road



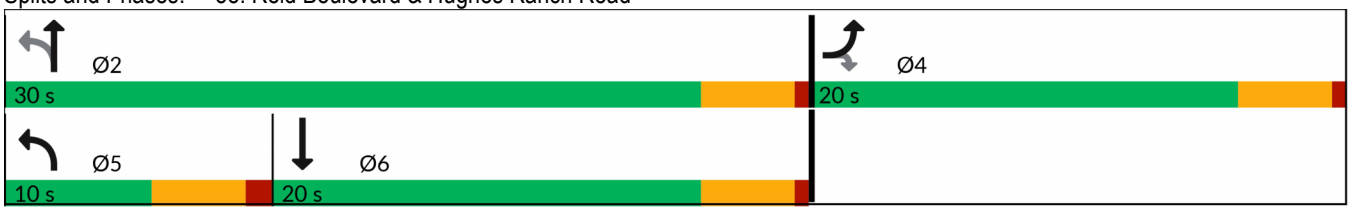


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	19	154	124	104	144	14
Future Volume (vph)	19	154	124	104	144	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500	150	150			150
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.987	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3493	0
Flt Permitted	0.950		0.528			
Satd. Flow (perm)	1770	1583	984	3539	3493	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		167			15	
Link Speed (mph)	30			30	30	
Link Distance (ft)	5457			901	567	
Travel Time (s)	124.0			20.5	12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	167	135	113	157	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	167	135	113	172	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	5.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	9.5	20.0	20.0	
Total Split (s)	20.0	20.0	10.0	30.0	20.0	
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	
Maximum Green (s)	16.0	16.0	5.5	26.0	16.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	1.0	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	None	
Walk Time (s)	5.0	5.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	6.7	6.7	28.4	29.6	21.4	
Actuated g/C Ratio	0.16	0.16	0.68	0.71	0.51	
v/c Ratio	0.07	0.42	0.18	0.05	0.10	
Control Delay (s/veh)	14.7	7.1	4.0	3.1	7.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	14.7	7.1	4.0	3.1	7.7	
LOS	B	A	A	A	A	
Approach Delay (s/veh)	8.0			3.6	7.7	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 41.8			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay (s/veh): 6.1		Intersection LOS: A	
Intersection Capacity Utilization 24.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 55: Reid Boulevard & Hughes Ranch Road



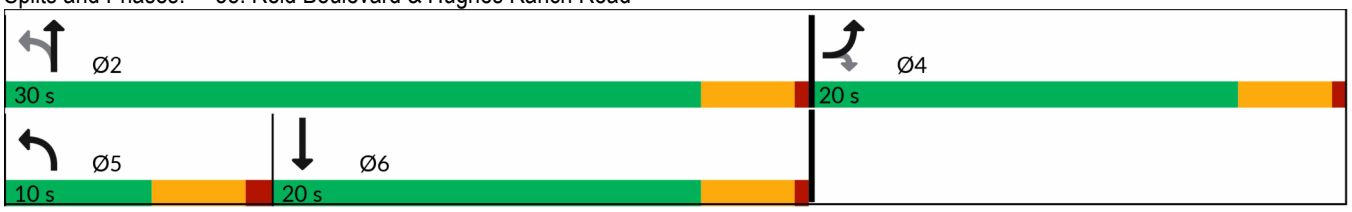


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	102	129	149	95	13
Future Volume (vph)	9	102	129	149	95	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500	150	150			150
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.982	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3476	0
Flt Permitted	0.950		0.533			
Satd. Flow (perm)	1770	1583	993	3539	3476	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		111			14	
Link Speed (mph)	30			30	30	
Link Distance (ft)	5457			901	567	
Travel Time (s)	124.0			20.5	12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	111	140	162	103	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	111	140	162	117	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	5.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	9.5	20.0	20.0	
Total Split (s)	20.0	20.0	10.0	30.0	20.0	
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	
Maximum Green (s)	16.0	16.0	5.5	26.0	16.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	1.0	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Max	None	
Walk Time (s)	5.0	5.0		5.0	5.0	
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	
Act Effct Green (s)	6.4	6.4	29.8	30.9	18.7	
Actuated g/C Ratio	0.16	0.16	0.75	0.78	0.47	
v/c Ratio	0.03	0.32	0.14	0.06	0.07	
Control Delay (s/veh)	14.4	7.0	3.4	2.7	7.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	14.4	7.0	3.4	2.7	7.6	
LOS	B	A	A	A	A	
Approach Delay (s/veh)	7.6			3.0	7.6	
Approach LOS	A			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 39.6			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.32			
Intersection Signal Delay (s/veh): 5.0		Intersection LOS: A	
Intersection Capacity Utilization 23.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 55: Reid Boulevard & Hughes Ranch Road



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1569	97		395	
Travel Time (s)		35.7	2.2		9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	22	0	0	2053	29
Future Volume (vph)	0	22	0	0	2053	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt		0.865				0.850
Flt Protected						
Satd. Flow (prot)	0	1611	0	0	3539	1583
Flt Permitted						
Satd. Flow (perm)	0	1611	0	0	3539	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	216			500	772	
Travel Time (s)	4.9			11.4	17.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	24	0	0	2232	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	24	0	0	2232	32
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.8%		ICU Level of Service C	
Analysis Period (min) 15			



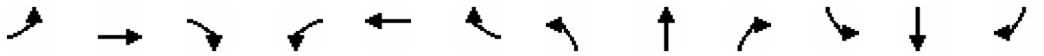
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1569	97		395	
Travel Time (s)		35.7	2.2		9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



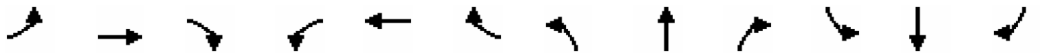
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	5	0	0	1241	14
Future Volume (vph)	0	5	0	0	1241	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt		0.865				0.850
Flt Protected						
Satd. Flow (prot)	0	1611	0	0	3539	1583
Flt Permitted						
Satd. Flow (perm)	0	1611	0	0	3539	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	216			500	772	
Travel Time (s)	4.9			11.4	17.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	5	0	0	1349	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	5	0	0	1349	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		



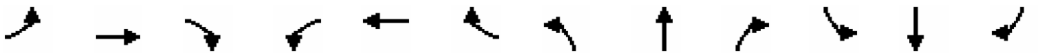
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Future Volume (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925			0.925			0.925			0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3274	0	1770	3274	0	1770	1723	0	1770	1723	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3274	0	1770	3274	0	1770	1723	0	1770	1723	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3590			2239			733			785	
Travel Time (s)		81.6			50.9			16.7			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	2	0	1	2	0	1	2	0	1	2	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



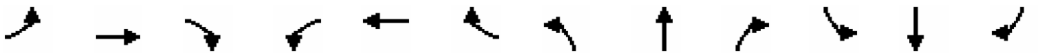
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	3539	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	3539	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2249			1946			317			367	
Travel Time (s)		51.1			44.2			7.2			8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	100	50	50	100	50	25	50	25	25	50	25
Future Volume (vph)	50	100	50	50	100	50	25	50	25	25	50	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.950			0.950			0.950			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3362	0	1770	3362	0	1770	1770	0	1770	1770	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3362	0	1770	3362	0	1770	1770	0	1770	1770	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3590			2239			733			785	
Travel Time (s)		81.6			50.9			16.7			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	109	54	54	109	54	27	54	27	27	54	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	163	0	54	163	0	27	81	0	27	81	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.7%		ICU Level of Service A	
Analysis Period (min) 15			



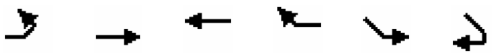
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	3539	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	3539	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2249			1946			317			367	
Travel Time (s)		51.1			44.2			7.2			8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		0	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1502			3319	640	
Travel Time (s)	34.1			75.4	14.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



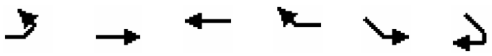
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	0	3278	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	0	3278	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1127	334		1418	
Travel Time (s)		25.6	7.6		32.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



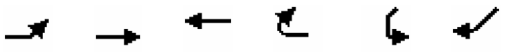
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		0	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1502			3319	640	
Travel Time (s)	34.1			75.4	14.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



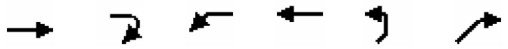
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	0	3278	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	0	3278	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1127	334		1418	
Travel Time (s)		25.6	7.6		32.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



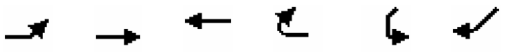
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	10	0	0	0	6
Future Volume (vph)	0	10	0	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	3539	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	0	3539	0	0	0	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	683		720	
Travel Time (s)		5.3	15.5		16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	11	0	0	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	11	0	0	0	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		20	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		0	0		0	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



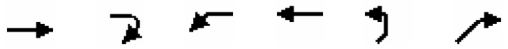
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	312			213	239	
Travel Time (s)	7.1			4.8	5.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



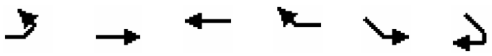
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	10	0	0	0	6
Future Volume (vph)	0	10	0	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	3539	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	0	3539	0	0	0	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	683		720	
Travel Time (s)		5.3	15.5		16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	11	0	0	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	11	0	0	0	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		20	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		0	0		0	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



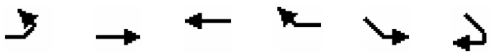
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	312			213	239	
Travel Time (s)	7.1			4.8	5.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	1863	1863	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	1863	1863	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		213	215		156	
Travel Time (s)		4.8	4.9		3.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	1863	1863	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	1863	1863	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		213	215		156	
Travel Time (s)		4.8	4.9		3.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

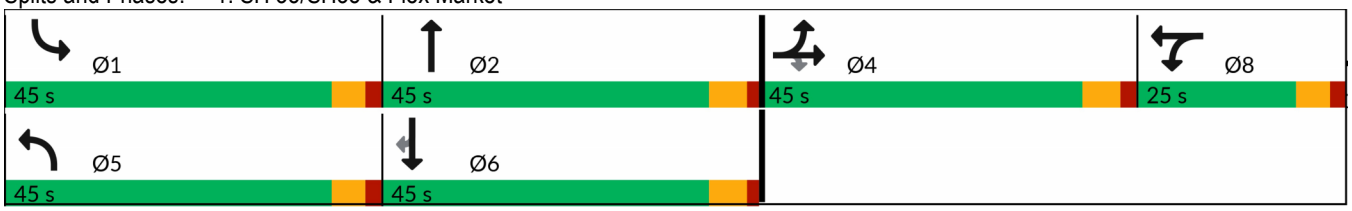
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	3	0	0	0	3	3	2297	6	12	1547	3
Future Volume (vph)	1	3	0	0	0	3	3	2297	6	12	1547	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	120		150
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor												
Frt					0.865							0.850
Flt Protected		0.988					0.950			0.950		
Satd. Flow (prot)	0	1840	1863	0	1611	0	1770	5085	0	1770	5085	1583
Flt Permitted		0.988					0.950			0.950		
Satd. Flow (perm)	0	1840	1863	0	1611	0	1770	5085	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					724							106
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		769			683			1825			845	
Travel Time (s)		17.5			15.5			41.5			19.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	3	0	0	0	3	3	2497	7	13	1682	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	3	0	3	2504	0	13	1682	3
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turn Type	Split	NA	Perm		NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												

Lanes, Volumes, Timings
1: SH 35/SH35 & Flex Market 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	25.0	25.0	25.0	22.0	22.0		25.0	45.0		25.0	45.0	45.0
Total Split (s)	45.0	45.0	45.0	25.0	25.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	28.1%	28.1%	28.1%	15.6%	15.6%		28.1%	28.1%		28.1%	28.1%	28.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	Max		None	None	None
Act Effct Green (s)		5.8			5.6		5.7	58.4		6.1	58.5	58.5
Actuated g/C Ratio		0.09			0.09		0.09	0.90		0.09	0.90	0.90
v/c Ratio		0.02			0.00		0.02	0.55		0.08	0.37	0.00
Control Delay (s/veh)		31.8			0.0		31.7	6.9		31.5	4.5	0.0
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)		31.8			0.0		31.7	6.9		31.5	4.5	0.0
LOS		C			A		C	A		C	A	A
Approach Delay (s/veh)		31.8						6.9			4.7	
Approach LOS		C						A			A	
90th %ile Green (s)	6.2	6.2	6.2	5.5	5.5		6.1	41.6		7.1	42.6	42.6
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap	Dwell		Gap	Dwell	Dwell
70th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
70th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell
50th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
50th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 65			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 6.0		Intersection LOS: A	
Intersection Capacity Utilization 58.3%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 84.9			
70th %ile Actuated Cycle: 60			
50th %ile Actuated Cycle: 60			
30th %ile Actuated Cycle: 60			
10th %ile Actuated Cycle: 60			

Splits and Phases: 1: SH 35/SH35 & Flex Market



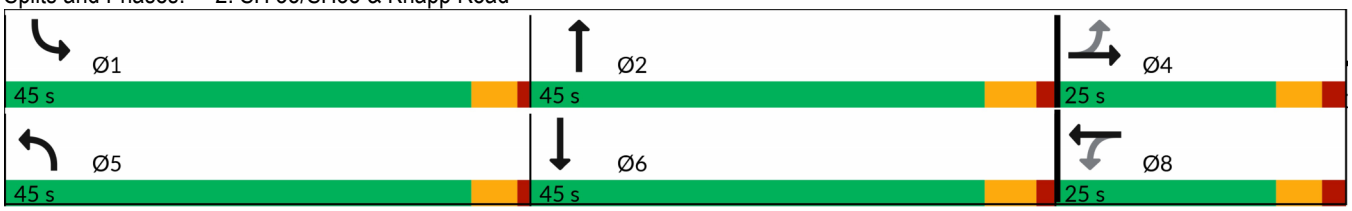
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	3	22	0	187	15	2097	21	43	1471	31
Future Volume (vph)	10	0	3	22	0	187	15	2097	21	43	1471	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	500		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.971			0.879			0.999			0.997	
Flt Protected		0.962			0.995		0.950			0.950		
Satd. Flow (prot)	0	1740	0	0	1629	0	1770	5080	0	1770	5070	0
Flt Permitted		0.464			0.960		0.950			0.950		
Satd. Flow (perm)	0	839	0	0	1572	0	1770	5080	0	1770	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			203			1			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			854			3282			1825	
Travel Time (s)		9.6			19.4			74.6			41.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	11	0	3	24	0	203	16	2279	23	47	1599	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	227	0	16	2302	0	47	1633	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

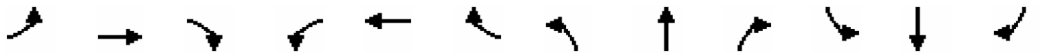
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		25.0	45.0		25.0	45.0	
Total Split (s)	25.0	25.0		25.0	25.0		45.0	45.0		45.0	45.0	
Total Split (%)	21.7%	21.7%		21.7%	21.7%		39.1%	39.1%		39.1%	39.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		5.0	6.0		5.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)		7.7			7.7		6.3	39.7		7.3	44.9	
Actuated g/C Ratio		0.12			0.12		0.09	0.59		0.11	0.67	
v/c Ratio		0.09			0.63		0.10	0.76		0.24	0.48	
Control Delay (s/veh)		1.0			15.3		32.9	14.6		33.1	7.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		1.0			15.3		32.9	14.6		33.1	7.0	
LOS		A			B		C	B		C	A	
Approach Delay (s/veh)		1.0			15.3			14.8			7.7	
Approach LOS		A			B			B			A	
90th %ile Green (s)	12.7	12.7		12.7	12.7		7.5	39.0		9.7	41.2	
90th %ile Term Code	Hold	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	8.9	8.9		8.9	8.9		0.0	39.0		8.2	52.2	
70th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
50th %ile Green (s)	6.6	6.6		6.6	6.6		0.0	39.0		7.2	51.2	
50th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
30th %ile Green (s)	5.5	5.5		5.5	5.5		0.0	39.0		0.0	39.0	
30th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	5.5	5.5		5.5	5.5		0.0	39.0		0.0	39.0	
10th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 66.9
Natural Cycle: 95
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay (s/veh): 12.0 Intersection LOS: B
Intersection Capacity Utilization 63.4% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 78.4
70th %ile Actuated Cycle: 73.1
50th %ile Actuated Cycle: 69.8
30th %ile Actuated Cycle: 56.5
10th %ile Actuated Cycle: 56.5

Splits and Phases: 2: SH 35/SH35 & Knapp Road



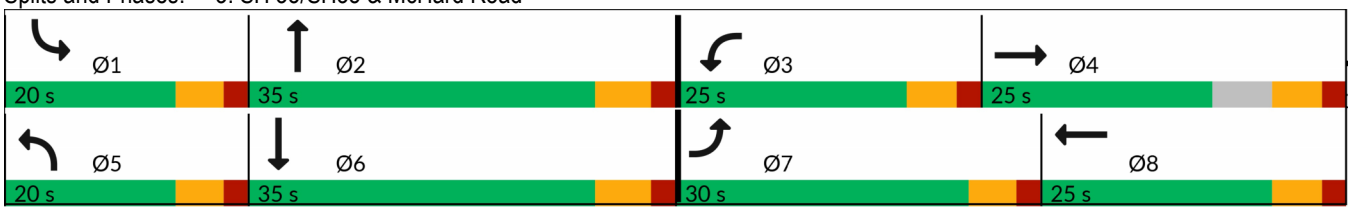


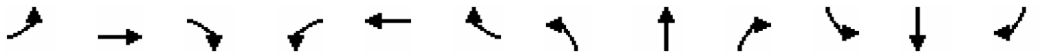
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	426	435	431	221	571	117	271	1594	127	64	1152	306
Future Volume (vph)	426	435	431	221	571	117	271	1594	127	64	1152	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	200		150	150		150	500		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.925			0.975			0.989			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3274	0	1770	3451	0	1770	5029	0	1770	4923	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3274	0	1770	3451	0	1770	5029	0	1770	4923	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		208			19			11			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1204			2764			3429			3282	
Travel Time (s)		27.4			62.8			77.9			74.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	463	473	468	240	621	127	295	1733	138	70	1252	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	463	941	0	240	748	0	295	1871	0	70	1585	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	8.0		3.0	8.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	20.0	24.0		15.0	24.0		15.0	30.0		15.0	30.0	
Total Split (s)	30.0	25.0		25.0	25.0		20.0	35.0		20.0	35.0	
Total Split (%)	27.3%	22.7%		22.7%	22.7%		18.2%	31.8%		18.2%	31.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.5		6.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	24.0	25.2		17.8	19.0		14.0	35.2		9.7	28.5	
Actuated g/C Ratio	0.22	0.23		0.16	0.17		0.13	0.32		0.09	0.26	
v/c Ratio	1.20	1.03		0.84	1.22		1.31	1.16		0.45	1.20	
Control Delay (s/veh)	150.6	71.9		70.0	153.5		207.0	113.6		56.0	133.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	150.6	71.9		70.0	153.5		207.0	113.6		56.0	133.6	
LOS	F	E		E	F		F	F		E	F	
Approach Delay (s/veh)		97.9			133.2			126.3			130.3	
Approach LOS		F			F			F			F	
90th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	29.1		13.4	28.5	
90th %ile Term Code	Max	Hold		Max	Max		Max	Hold		Gap	MaxR	
70th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	31.3		11.2	28.5	
70th %ile Term Code	Max	Hold		Max	Max		Max	Hold		Gap	MaxR	
50th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	32.8		9.7	28.5	
50th %ile Term Code	Max	Hold		Max	Max		Max	Hold		Gap	MaxR	
30th %ile Green (s)	24.0	25.1		17.9	19.0		14.0	34.3		8.2	28.5	
30th %ile Term Code	Max	Hold		Gap	Max		Max	Hold		Gap	MaxR	
10th %ile Green (s)	24.0	29.1		13.9	19.0		14.0	48.5		0.0	28.5	
10th %ile Term Code	Max	Hold		Gap	Max		Max	Hold		Skip	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.31			
Intersection Signal Delay (s/veh): 122.0		Intersection LOS: F	
Intersection Capacity Utilization 107.6%		ICU Level of Service G	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 110			
70th %ile Actuated Cycle: 110			
50th %ile Actuated Cycle: 110			
30th %ile Actuated Cycle: 110			
10th %ile Actuated Cycle: 110			

Splits and Phases: 3: SH 35/SH35 & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	16	78	4	28	101	1881	151	61	1332	24
Future Volume (vph)	0	0	16	78	4	28	101	1881	151	61	1332	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	120		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850		0.989			0.997	
Flt Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	1863	1583	0	1777	1583	1770	5029	0	1770	5070	0
Flt Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	1863	1583	0	1777	1583	1770	5029	0	1770	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			387			109		9			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		568			482			1254			3429	
Travel Time (s)		12.9			11.0			28.5			77.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	17	85	4	30	110	2045	164	66	1448	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	17	0	89	30	110	2209	0	66	1474	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turn Type			Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
4: SH 35/SH35 & PISD

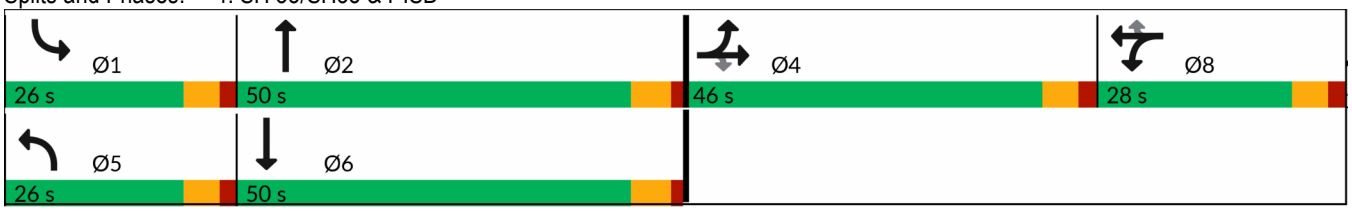
09/16/2024

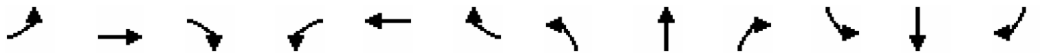
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0	10.0	5.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0	45.0	25.0	25.0	25.0	25.0	45.0		25.0	24.0	
Total Split (s)	46.0	46.0	46.0	28.0	28.0	28.0	26.0	50.0		26.0	50.0	
Total Split (%)	30.7%	30.7%	30.7%	18.7%	18.7%	18.7%	17.3%	33.3%		17.3%	33.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Act Effct Green (s)			10.2		10.1	10.1	11.1	54.1		9.0	47.5	
Actuated g/C Ratio			0.11		0.11	0.11	0.12	0.60		0.10	0.53	
v/c Ratio			0.03		0.45	0.11	0.50	0.73		0.37	0.55	
Control Delay (s/veh)			0.1		47.3	0.8	47.3	21.0		47.3	18.3	
Queue Delay			0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)			0.1		47.3	0.8	47.3	21.0		47.3	18.3	
LOS			A		D	A	D	C		D	B	
Approach Delay (s/veh)		0.1			35.6			22.3			19.6	
Approach LOS		A			D			C			B	
90th %ile Green (s)	10.0	10.0	10.0	14.6	14.6	14.6	16.2	47.5		12.7	44.0	
90th %ile Term Code	Min	Min	Min	Gap	Gap	Gap	Gap	Hold		Gap	MaxR	
70th %ile Green (s)	10.0	10.0	10.0	12.0	12.0	12.0	13.4	46.8		10.6	44.0	
70th %ile Term Code	Min	Min	Min	Gap	Gap	Gap	Gap	Hold		Gap	MaxR	
50th %ile Green (s)	0.0	0.0	0.0	9.6	9.6	9.6	10.5	45.9		8.6	44.0	
50th %ile Term Code	Skip	Skip	Skip	Gap	Gap	Gap	Gap	Hold		Gap	MaxR	
30th %ile Green (s)	0.0	0.0	0.0	8.4	8.4	8.4	9.1	45.6		7.5	44.0	
30th %ile Term Code	Skip	Skip	Skip	Gap	Gap	Gap	Gap	Hold		Gap	MaxR	
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0	0.0	7.5	67.5		0.0	54.0	
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip	Skip	Gap	Dwell		Skip	Dwell	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 89.5
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay (s/veh): 21.5 Intersection LOS: C
Intersection Capacity Utilization 62.6% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 108.8
70th %ile Actuated Cycle: 103.4
50th %ile Actuated Cycle: 82.1
30th %ile Actuated Cycle: 79.5
10th %ile Actuated Cycle: 73.5

Splits and Phases: 4: SH 35/SH35 & PISD





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	195	89	117	123	235	80	1679	64	150	1279	55
Future Volume (vph)	170	195	89	117	123	235	80	1679	64	150	1279	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	200		100	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.953			0.902			0.994			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3373	0	1770	3192	0	1770	5055	0	1770	5055	0
Flt Permitted	0.278			0.564			0.950			0.950		
Satd. Flow (perm)	518	3373	0	1051	3192	0	1770	5055	0	1770	5055	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		52			255			4			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2722			832			2002			1254	
Travel Time (s)		61.9			18.9			45.5			28.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	185	212	97	127	134	255	87	1825	70	163	1390	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	309	0	127	389	0	87	1895	0	163	1450	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
5: SH 35 & W Orange Street

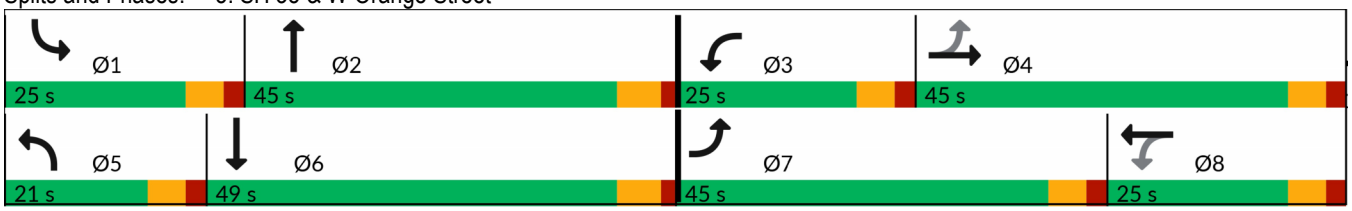
09/16/2024

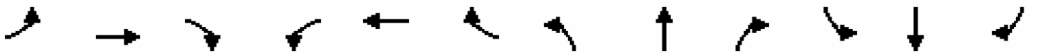
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		5.0	5.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0		25.0	25.0		20.0	45.0		25.0	45.0	
Total Split (s)	45.0	45.0		25.0	25.0		21.0	45.0		25.0	49.0	
Total Split (%)	32.1%	32.1%		17.9%	17.9%		15.0%	32.1%		17.9%	35.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	28.8	14.4		21.9	10.9		10.5	39.4		14.5	46.4	
Actuated g/C Ratio	0.28	0.14		0.21	0.11		0.10	0.38		0.14	0.45	
v/c Ratio	0.58	0.60		0.42	0.69		0.49	0.98		0.66	0.64	
Control Delay (s/veh)	35.8	40.4		32.2	22.9		55.2	50.0		56.6	26.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	35.8	40.4		32.2	22.9		55.2	50.0		56.6	26.1	
LOS	D	D		C	C		E	D		E	C	
Approach Delay (s/veh)		38.7			25.2			50.3			29.2	
Approach LOS		D			C			D			C	
90th %ile Green (s)	20.2	21.7		15.1	16.6		15.0	39.0		19.0	43.0	
90th %ile Term Code	Gap	Hold		Gap	Gap		Max	MaxR		Max	MaxR	
70th %ile Green (s)	16.6	16.2		12.7	12.3		12.2	39.0		17.6	44.4	
70th %ile Term Code	Gap	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	14.4	13.5		11.0	10.1		10.5	39.0		14.8	43.3	
50th %ile Term Code	Gap	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	12.2	11.6		9.5	8.9		8.8	39.3		12.5	43.0	
30th %ile Term Code	Gap	Gap		Gap	Hold		Gap	Hold		Gap	MaxR	
10th %ile Green (s)	10.0	10.0		7.5	7.5		0.0	39.0		9.5	54.5	
10th %ile Term Code	Min	Min		Gap	Hold		Skip	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 103.5
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay (s/veh): 38.8 Intersection LOS: D
Intersection Capacity Utilization 82.6% ICU Level of Service E
Analysis Period (min) 15
90th %ile Actuated Cycle: 118.8
70th %ile Actuated Cycle: 109.5
50th %ile Actuated Cycle: 102.3
30th %ile Actuated Cycle: 96.9
10th %ile Actuated Cycle: 90

Splits and Phases: 5: SH 35 & W Orange Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	407	665	198	155	483	139	218	1116	129	90	629	198
Future Volume (vph)	407	665	198	155	483	139	218	1116	129	90	629	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	380		0	180		0	180		160
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.966			0.967			0.984			0.964	
Flt Protected	0.950			0.950	0.999		0.950			0.950		
Satd. Flow (prot)	1770	3419	0	1610	3275	0	1770	3483	0	1770	3412	0
Flt Permitted	0.950			0.950	0.999		0.950			0.950		
Satd. Flow (perm)	1770	3419	0	1610	3275	0	1770	3483	0	1770	3412	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			19			10			33	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4203			1078			2138			5584	
Travel Time (s)		95.5			24.5			48.6			126.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	442	723	215	168	525	151	237	1213	140	98	684	215
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	442	938	0	151	693	0	237	1353	0	98	899	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5			1		
Permitted Phases								2			6	
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
8: SH 35 & Magnoila Parkway

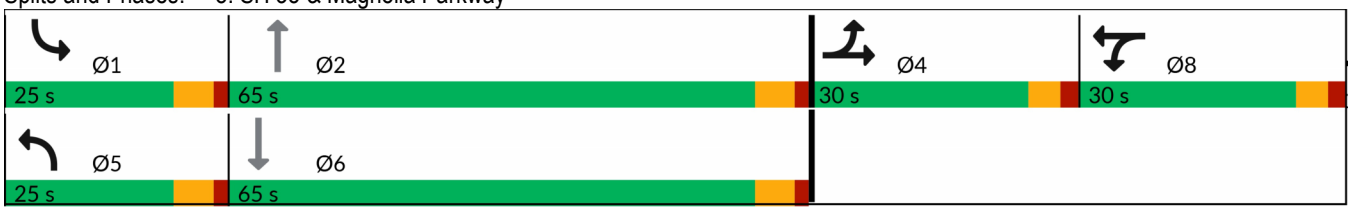
09/16/2024

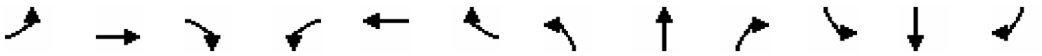
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		20.0	45.0		24.0	45.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	65.0		25.0	65.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		16.7%	43.3%		16.7%	43.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		Max	Max	
Act Effct Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.13	0.39		0.13	0.39	
v/c Ratio	1.53	1.63		0.58	1.26		1.06	0.98		0.44	0.66	
Control Delay (s/veh)	295.4	327.7		67.7	179.0		136.8	65.0		67.3	38.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	295.4	327.7		67.7	179.0		136.8	65.0		67.3	38.6	
LOS	F	F		E	F		F	E		E	D	
Approach Delay (s/veh)		317.3			159.1			75.7			41.5	
Approach LOS		F			F			E			D	
90th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
70th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
70th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
50th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
50th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
30th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
30th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
10th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
10th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.63
Intersection Signal Delay (s/veh): 152.5 Intersection LOS: F
Intersection Capacity Utilization 98.7% ICU Level of Service F
Analysis Period (min) 15
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 150
50th %ile Actuated Cycle: 150
30th %ile Actuated Cycle: 150
10th %ile Actuated Cycle: 150

Splits and Phases: 8: SH 35 & Magnoila Parkway





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	4	0	19	16	110	0	1397	53	238	703	40
Future Volume (vph)	1	4	0	19	16	110	0	1397	53	238	703	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt					0.897			0.994			0.992	
Flt Protected		0.990			0.993					0.950		
Satd. Flow (prot)	0	1844	1863	0	1659	0	1863	3518	0	1770	3511	0
Flt Permitted		0.990			0.993					0.181		
Satd. Flow (perm)	0	1844	1863	0	1659	0	1863	3518	0	337	3511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					120			5			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		688			655			2138			2138	
Travel Time (s)		15.6			14.9			48.6			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	4	0	21	17	120	0	1518	58	259	764	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	5	0	0	158	0	0	1576	0	259	807	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
9: SH 35/SH35 & High School

09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (%)	28.8%	28.8%	28.8%	28.8%	28.8%		13.7%	28.8%		13.7%	28.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	Max		None	None	
Act Effct Green (s)		5.8			7.0			17.4		26.7	28.1	
Actuated g/C Ratio		0.14			0.17			0.42		0.64	0.68	
v/c Ratio		0.02			0.42			1.07		0.66	0.34	
Control Delay (s/veh)		19.0			10.3			63.3		19.5	5.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay (s/veh)		19.0			10.3			63.3		19.5	5.5	
LOS		B			B			E		B	A	
Approach Delay (s/veh)		19.0			10.3			63.3			8.9	
Approach LOS		B			B			E			A	
90th %ile Green (s)	6.2	6.2	6.2	10.6	10.6		0.0	16.0		5.0	25.5	
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip	MaxR		Max	Hold	
70th %ile Green (s)	0.0	0.0	0.0	7.6	7.6		0.0	16.0		5.0	25.5	
70th %ile Term Code	Skip	Skip	Skip	Gap	Gap		Skip	MaxR		Max	Hold	
50th %ile Green (s)	0.0	0.0	0.0	6.4	6.4		0.0	16.0		5.0	25.5	
50th %ile Term Code	Skip	Skip	Skip	Gap	Gap		Skip	MaxR		Max	Hold	
30th %ile Green (s)	0.0	0.0	0.0	5.5	5.5		0.0	16.0		5.0	25.5	
30th %ile Term Code	Skip	Skip	Skip	Gap	Gap		Skip	MaxR		Max	Hold	
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	20.3		5.0	29.8	
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Max	Dwell	

Intersection Summary

Area Type: Other

Cycle Length: 69.5

Actuated Cycle Length: 41.6

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.07

Intersection Signal Delay (s/veh): 39.6 Intersection LOS: D

Intersection Capacity Utilization 79.2% ICU Level of Service D

Analysis Period (min) 15

90th %ile Actuated Cycle: 54.3

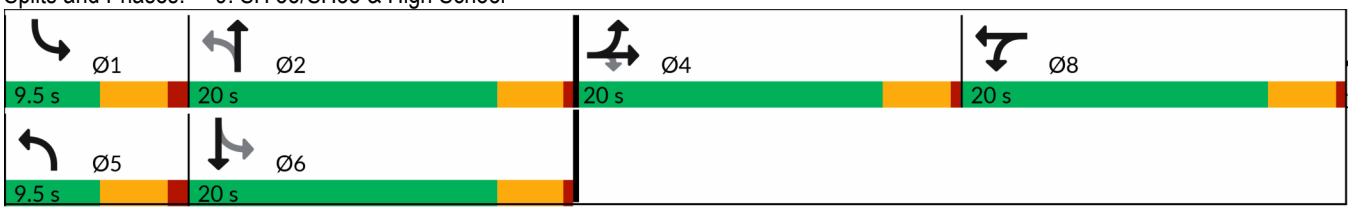
70th %ile Actuated Cycle: 41.1

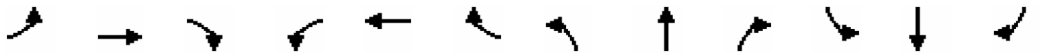
50th %ile Actuated Cycle: 39.9

30th %ile Actuated Cycle: 39

10th %ile Actuated Cycle: 33.8

Splits and Phases: 9: SH 35/SH35 & High School





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	502	419	38	278	102	280	759	25	150	517	158
Future Volume (vph)	225	502	419	38	278	102	280	759	25	150	517	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		0
Storage Lanes	3		0	2		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.932			0.960			0.995			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3299	0	3433	3398	0	1770	3522	0	1770	3415	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3299	0	3433	3398	0	1770	3522	0	1770	3415	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		131			33			2			29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		782			1497			6422			2138	
Travel Time (s)		17.8			34.0			146.0			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	245	546	455	41	302	111	304	825	27	163	562	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	245	1001	0	41	413	0	304	852	0	163	734	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		42			42			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
10: SH 35/SH35 & Bailey Road

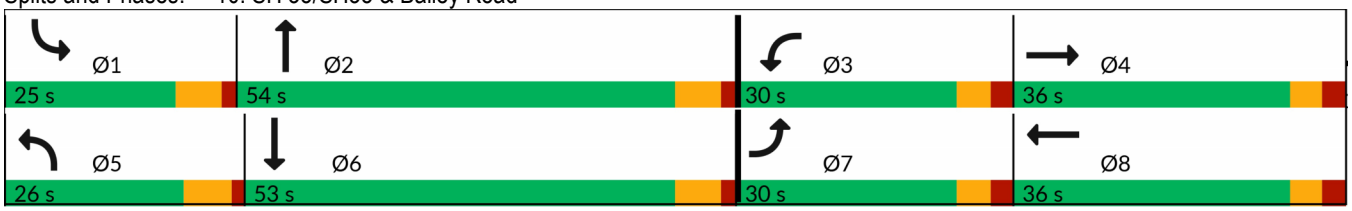
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		20.0	50.0		25.0	50.0	
Total Split (s)	30.0	36.0		30.0	36.0		26.0	54.0		25.0	53.0	
Total Split (%)	20.7%	24.8%		20.7%	24.8%		17.9%	37.2%		17.2%	36.6%	
Yellow Time (s)	3.5	3.5		3.5	3.5		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	14.2	31.5		7.0	21.5		19.6	47.8		15.8	44.0	
Actuated g/C Ratio	0.11	0.25		0.06	0.17		0.16	0.38		0.13	0.35	
v/c Ratio	0.63	1.08		0.21	0.67		1.09	0.63		0.73	0.60	
Control Delay (s/veh)	60.8	90.7		61.5	50.6		130.0	35.0		72.4	34.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	60.8	90.7		61.5	50.6		130.0	35.0		72.4	34.7	
LOS	E	F		E	D		F	D		E	C	
Approach Delay (s/veh)		84.8			51.6			60.0			41.6	
Approach LOS		F			D			E			D	
90th %ile Green (s)	19.0	36.9		8.7	26.6		19.5	47.5		18.5	46.5	
90th %ile Term Code	Gap	Hold		Gap	Gap		Max	MaxR		Max	Hold	
70th %ile Green (s)	16.0	30.1		7.6	21.7		19.5	47.5		18.5	46.5	
70th %ile Term Code	Gap	Hold		Gap	Gap		Max	MaxR		Max	Hold	
50th %ile Green (s)	14.3	30.0		6.9	22.6		19.5	47.5		17.3	45.3	
50th %ile Term Code	Gap	Max		Gap	Hold		Max	MaxR		Gap	Hold	
30th %ile Green (s)	12.7	30.0		6.3	23.6		19.5	47.5		14.7	42.7	
30th %ile Term Code	Gap	Max		Gap	Hold		Max	MaxR		Gap	Hold	
10th %ile Green (s)	9.9	30.0		0.0	14.1		19.5	47.5		10.7	38.7	
10th %ile Term Code	Gap	Max		Skip	Hold		Max	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 124.5
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay (s/veh): 62.8 Intersection LOS: E
Intersection Capacity Utilization 87.2% ICU Level of Service E
Analysis Period (min) 15
90th %ile Actuated Cycle: 136.6
70th %ile Actuated Cycle: 128.7
50th %ile Actuated Cycle: 126.7
30th %ile Actuated Cycle: 123.5
10th %ile Actuated Cycle: 107.2

Splits and Phases: 10: SH 35/SH35 & Bailey Road

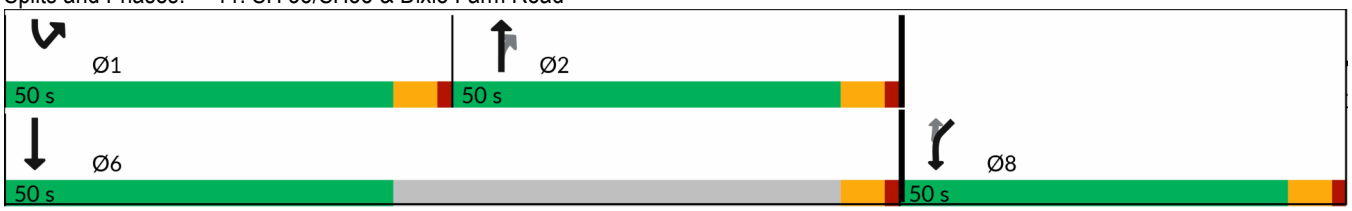


Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	919	876	346	536	493	292
Future Volume (vph)	919	876	346	536	493	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	320		180	0
Storage Lanes		1	1		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		428				317
Link Speed (mph)	30			30	30	
Link Distance (ft)	8103			6422	2765	
Travel Time (s)	184.2			146.0	62.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	999	952	376	583	536	317
Shared Lane Traffic (%)						
Lane Group Flow (vph)	999	952	376	583	536	317
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Minimum Initial (s)	15.0	15.0	5.0	15.0	5.0	5.0
Minimum Split (s)	45.0	45.0	30.0	45.0	30.0	30.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	None
Act Effct Green (s)	44.1	44.1	30.4	81.1	25.0	25.0
Actuated g/C Ratio	0.37	0.37	0.25	0.68	0.21	0.21
v/c Ratio	0.76	1.11	0.83	0.24	0.75	0.54
Control Delay (s/veh)	39.8	88.1	59.0	8.0	51.7	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.8	88.1	59.0	8.0	51.7	8.2
LOS	D	F	E	A	D	A
Approach Delay (s/veh)	63.4			28.0	35.5	
Approach LOS	E			C	D	
90th %ile Green (s)	43.5	43.5	43.5	93.5	34.4	34.4
90th %ile Term Code	MaxR	MaxR	Max	Hold	Gap	Gap
70th %ile Green (s)	43.5	43.5	35.5	85.5	28.6	28.6
70th %ile Term Code	MaxR	MaxR	Gap	Hold	Gap	Gap
50th %ile Green (s)	43.5	43.5	30.3	80.3	25.0	25.0
50th %ile Term Code	MaxR	MaxR	Gap	Hold	Gap	Gap
30th %ile Green (s)	43.5	43.5	25.7	75.7	21.8	21.8
30th %ile Term Code	MaxR	MaxR	Gap	Hold	Gap	Gap
10th %ile Green (s)	43.5	43.5	19.7	69.7	16.9	16.9
10th %ile Term Code	MaxR	MaxR	Gap	Hold	Gap	Gap

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 119.3	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay (s/veh): 48.0	Intersection LOS: D
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	
90th %ile Actuated Cycle: 140.9	
70th %ile Actuated Cycle: 127.1	
50th %ile Actuated Cycle: 118.3	
30th %ile Actuated Cycle: 110.5	
10th %ile Actuated Cycle: 99.6	

Splits and Phases: 11: SH 35/SH35 & Dixie Farm Road



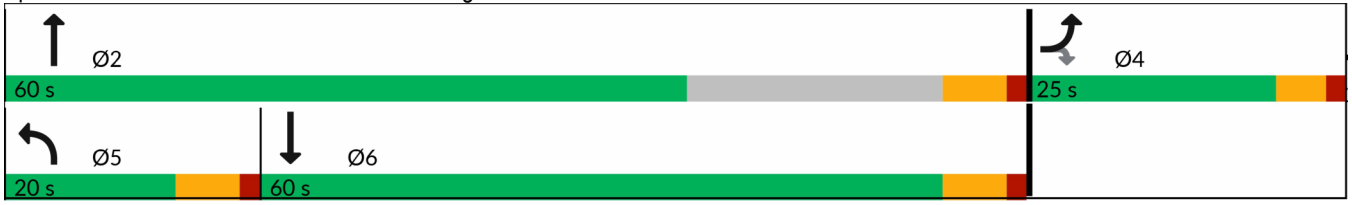


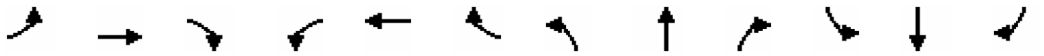
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	102	337	136	1699	1004	55
Future Volume (vph)	102	337	136	1699	1004	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	150	180			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor						
Frt		0.850			0.992	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3511	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3511	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		270			8	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1279			693	8103	
Travel Time (s)	29.1			15.8	184.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	111	366	148	1847	1091	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	366	148	1847	1151	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	
Minimum Split (s)	25.0	25.0	20.0	60.0	60.0	
Total Split (s)	25.0	25.0	20.0	60.0	60.0	
Total Split (%)	23.8%	23.8%	19.0%	57.1%	57.1%	
Yellow Time (s)	4.0	4.0	5.0	5.0	5.0	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	6.5	6.5	6.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	Max	None	
Act Effct Green (s)	12.0	12.0	11.3	58.9	41.0	
Actuated g/C Ratio	0.14	0.14	0.14	0.71	0.49	
v/c Ratio	0.44	0.80	0.61	0.74	0.66	
Control Delay (s/veh)	39.0	24.2	47.7	10.2	18.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	39.0	24.2	47.7	10.2	18.9	
LOS	D	C	D	B	B	
Approach Delay (s/veh)	27.6			13.0	18.9	
Approach LOS	C			B	B	
90th %ile Green (s)	19.5	19.5	13.5	71.3	51.3	
90th %ile Term Code	Max	Max	Max	Hold	Gap	
70th %ile Green (s)	15.9	15.9	13.5	62.0	42.0	
70th %ile Term Code	Gap	Gap	Max	Hold	Gap	
50th %ile Green (s)	11.1	11.1	12.1	53.5	34.9	
50th %ile Term Code	Gap	Gap	Gap	MaxR	Hold	
30th %ile Green (s)	8.6	8.6	10.0	53.5	37.0	
30th %ile Term Code	Gap	Gap	Gap	MaxR	Hold	
10th %ile Green (s)	6.7	6.7	7.8	53.5	39.2	
10th %ile Term Code	Gap	Gap	Gap	MaxR	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 83.1			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay (s/veh): 16.8		Intersection LOS: B	
Intersection Capacity Utilization 62.6%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 102.8			
70th %ile Actuated Cycle: 89.9			
50th %ile Actuated Cycle: 76.6			
30th %ile Actuated Cycle: 74.1			
10th %ile Actuated Cycle: 72.2			

Splits and Phases: 12: SH 35/SH35 & Hastings Canon Road





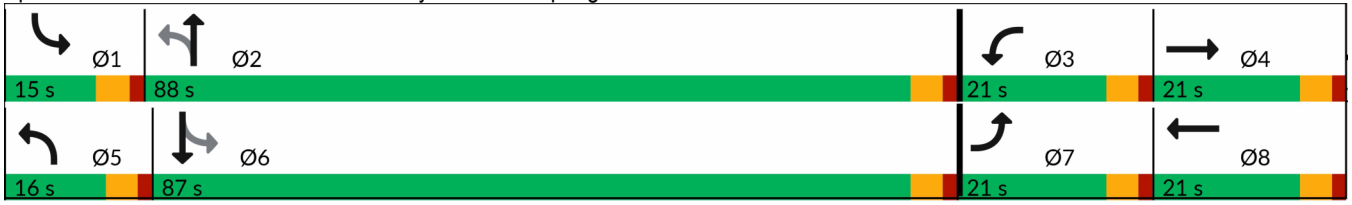
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	3	74	12	0	36	144	2158	9	10	1055	65
Future Volume (vph)	163	3	74	12	0	36	144	2158	9	10	1055	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	180		150	180		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.855			0.850			0.999			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1593	0	1770	1583	0	1770	3536	0	1770	3507	0
Flt Permitted	0.950			0.950			0.148			0.052		
Satd. Flow (perm)	1770	1593	0	1770	1583	0	276	3536	0	97	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		80			123						7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1005			878			1367			830	
Travel Time (s)		22.8			20.0			31.1			18.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	177	3	80	13	0	39	157	2346	10	11	1147	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	83	0	13	39	0	157	2356	0	11	1218	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
13: Pearland Parkway & Summit Springs Lane 09/16/2024

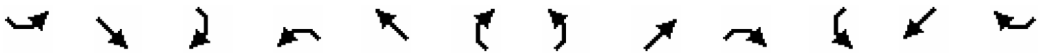
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		15.0	45.0		15.0	45.0	
Total Split (s)	21.0	21.0		21.0	21.0		16.0	88.0		15.0	87.0	
Total Split (%)	14.5%	14.5%		14.5%	14.5%		11.0%	60.7%		10.3%	60.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	15.5	20.8		8.1	8.1		87.5	83.5		79.4	73.6	
Actuated g/C Ratio	0.13	0.17		0.07	0.07		0.71	0.68		0.64	0.60	
v/c Ratio	0.79	0.25		0.11	0.18		0.51	0.98		0.08	0.58	
Control Delay (s/veh)	79.0	14.1		60.4	1.8		12.4	36.1		7.4	17.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	79.0	14.1		60.4	1.8		12.4	36.1		7.4	17.4	
LOS	E	B		E	A		B	D		A	B	
Approach Delay (s/veh)		58.3			16.5			34.6			17.3	
Approach LOS		E			B			C			B	
90th %ile Green (s)	16.0	15.9		8.1	8.0		11.0	83.0		6.2	78.2	
90th %ile Term Code	Max	Hold		Gap	Min		Max	MaxR		Gap	Hold	
70th %ile Green (s)	16.0	16.0		8.0	8.0		10.2	83.0		5.9	78.7	
70th %ile Term Code	Max	Hold		Min	Min		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	16.0	29.0		0.0	8.0		9.2	83.0		0.0	68.8	
50th %ile Term Code	Max	Hold		Skip	Min		Gap	MaxR		Skip	Hold	
30th %ile Green (s)	16.0	29.0		0.0	8.0		8.4	83.0		0.0	69.6	
30th %ile Term Code	Max	Hold		Skip	Min		Gap	MaxR		Skip	Hold	
10th %ile Green (s)	13.5	13.5		0.0	0.0		6.6	83.0		0.0	71.4	
10th %ile Term Code	Gap	Hold		Skip	Skip		Gap	MaxR		Skip	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 123.3			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay (s/veh): 30.7		Intersection LOS: C	
Intersection Capacity Utilization 92.3%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 133.2			
70th %ile Actuated Cycle: 132.9			
50th %ile Actuated Cycle: 122			
30th %ile Actuated Cycle: 122			
10th %ile Actuated Cycle: 106.5			

Splits and Phases: 13: Pearland Parkway & Summit Springs Lane



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	256	710	135	3	1267	135	300	126	19	201	221	648
Future Volume (vph)	256	710	135	3	1267	135	300	126	19	201	221	648
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		120	120		120	120		120	120		120
Storage Lanes	1		1	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	0.97	0.95	0.95	0.97	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.998	0.850		0.980			0.888	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3383	1441	3433	3468	0	3433	3143	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3383	1441	3433	3468	0	3433	3143	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135		1	135		10			187	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		810			670			666			826	
Travel Time (s)		18.4			15.2			15.1			18.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	278	772	147	3	1377	147	326	137	21	218	240	704
Shared Lane Traffic (%)						10%						
Lane Group Flow (vph)	278	772	147	3	1392	132	326	158	0	218	944	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0	0	0	0	0	0	2		0	2	
Detector Template	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	0	0	0	0	0	0	100		0	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	25.0		25.0	25.0	
Total Split (s)	27.0	66.0	66.0	20.0	59.0	59.0	20.0	34.0		25.0	39.0	
Total Split (%)	18.6%	45.5%	45.5%	13.8%	40.7%	40.7%	13.8%	23.4%		17.2%	26.9%	
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max		None	None	
Act Effct Green (s)	20.0	76.3	76.3	5.9	52.0	52.0	13.0	30.6		14.4	32.0	
Actuated g/C Ratio	0.14	0.53	0.53	0.04	0.36	0.36	0.09	0.21		0.10	0.22	
v/c Ratio	1.14	0.41	0.16	0.04	1.15	0.22	1.06	0.21		0.64	1.42dr	
Control Delay (s/veh)	154.4	22.3	4.4	67.7	118.3	5.4	129.7	45.9		71.3	111.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	154.4	22.3	4.4	67.7	118.3	5.4	129.7	45.9		71.3	111.9	
LOS	F	C	A	E	F	A	F	D		E	F	
Approach Delay (s/veh)		50.8			108.5			102.3			104.3	
Approach LOS		D			F			F			F	
90th %ile Green (s)	20.0	65.4	65.4	6.6	52.0	52.0	13.0	27.0		18.0	32.0	
90th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Max	MaxR		Max	Max	
70th %ile Green (s)	20.0	79.0	79.0	0.0	52.0	52.0	13.0	28.9		16.1	32.0	
70th %ile Term Code	Max	Hold	Hold	Skip	Max	Max	Max	Hold		Gap	Max	
50th %ile Green (s)	20.0	79.0	79.0	0.0	52.0	52.0	13.0	30.5		14.5	32.0	
50th %ile Term Code	Max	Hold	Hold	Skip	Max	Max	Max	Hold		Gap	Max	
30th %ile Green (s)	20.0	79.0	79.0	0.0	52.0	52.0	13.0	32.1		12.9	32.0	
30th %ile Term Code	Max	Hold	Hold	Skip	Max	Max	Max	Hold		Gap	Max	
10th %ile Green (s)	20.0	79.0	79.0	0.0	52.0	52.0	13.0	34.4		10.6	32.0	
10th %ile Term Code	Max	Hold	Hold	Skip	Max	Max	Max	Hold		Gap	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 145			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay (s/veh): 90.9		Intersection LOS: F	
Intersection Capacity Utilization 109.6%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 145			
70th %ile Actuated Cycle: 145			
50th %ile Actuated Cycle: 145			
30th %ile Actuated Cycle: 145			
10th %ile Actuated Cycle: 145			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 14: Barry Rose Road/Hughes Road & Pearland Parkway



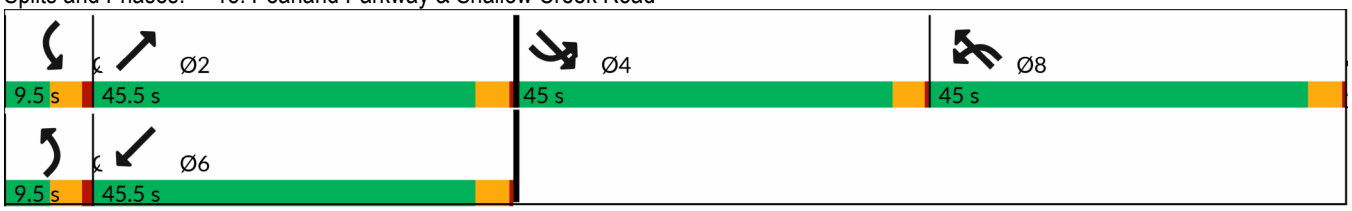
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	34	1	0	47	0	44	18	1245	44	13	801	59
Future Volume (vph)	34	1	0	47	0	44	18	1245	44	13	801	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	200		150	120		150
Storage Lanes	0		0	0		0	2		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt					0.927			0.995			0.990	
Flt Protected		0.954			0.975		0.950			0.950		
Satd. Flow (prot)	0	3376	0	0	3199	0	3433	3522	0	1770	3504	0
Flt Permitted		0.954			0.975		0.950			0.950		
Satd. Flow (perm)	0	3376	0	0	3199	0	3433	3522	0	1770	3504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					71			2			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		299			285			1148			332	
Travel Time (s)		6.8			6.5			26.1			7.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	37	1	0	51	0	48	20	1353	48	14	871	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	0	0	99	0	20	1401	0	14	935	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		0	0		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	20	0		20	0		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
15: Pearland Parkway & Shallow Creek Road 09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		9.5	45.0		9.5	45.0	
Total Split (s)	45.0	45.0		45.0	45.0		9.5	45.5		9.5	45.5	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		6.6%	31.4%		6.6%	31.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)		6.3			6.3		5.0	49.6		5.0	49.6	
Actuated g/C Ratio		0.09			0.09		0.07	0.72		0.07	0.72	
v/c Ratio		0.12			0.28		0.08	0.55		0.11	0.37	
Control Delay (s/veh)		31.2			15.2		32.6	8.7		34.1	6.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		31.2			15.2		32.6	8.7		34.1	6.8	
LOS		C			B		C	A		C	A	
Approach Delay (s/veh)		31.2			15.2			9.0			7.2	
Approach LOS		C			B			A			A	
90th %ile Green (s)	7.2	7.2		7.7	7.7		5.0	41.5		5.0	41.5	
90th %ile Term Code	Gap	Gap		Gap	Gap		Max	MaxR		Max	Hold	
70th %ile Green (s)	6.6	6.6		6.7	6.7		0.0	41.5		0.0	41.5	
70th %ile Term Code	Gap	Gap		Gap	Gap		Skip	MaxR		Skip	Hold	
50th %ile Green (s)	6.3	6.3		6.1	6.1		0.0	45.5		0.0	45.5	
50th %ile Term Code	Gap	Gap		Gap	Gap		Skip	Dwell		Skip	Dwell	
30th %ile Green (s)	0.0	0.0		5.5	5.5		0.0	55.0		0.0	55.0	
30th %ile Term Code	Skip	Skip		Gap	Gap		Skip	Dwell		Skip	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	56.5		0.0	56.5	
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Dwell		Skip	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 68.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 8.9		Intersection LOS: A	
Intersection Capacity Utilization 51.8%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 77.9			
70th %ile Actuated Cycle: 66.8			
50th %ile Actuated Cycle: 69.9			
30th %ile Actuated Cycle: 68.5			
10th %ile Actuated Cycle: 60.5			

Splits and Phases: 15: Pearland Parkway & Shallow Creek Road



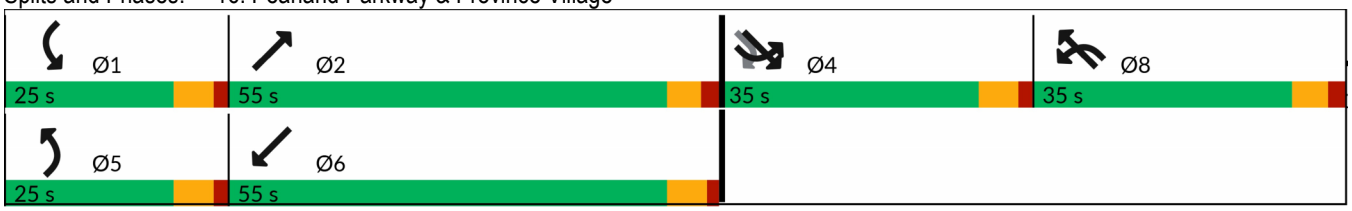
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	58	9	30	28	10	132	78	1045	28	43	870	34
Future Volume (vph)	58	9	30	28	10	132	78	1045	28	43	870	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		800	0		150	200		150	120		150
Storage Lanes	0		1	0		0	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	0.97	0.95	0.95	0.97	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.883			0.996			0.994	
Flt Protected		0.959			0.992		0.950			0.950		
Satd. Flow (prot)	0	1786	1583	0	3100	0	3433	3525	0	3433	3518	0
Flt Permitted		0.959			0.992		0.950			0.950		
Satd. Flow (perm)	0	1786	1583	0	3100	0	3433	3525	0	3433	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109		143			2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		737			805			403			1148	
Travel Time (s)		16.8			18.3			9.2			26.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	63	10	33	30	11	143	85	1136	30	47	946	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	73	33	0	184	0	85	1166	0	47	983	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	0	2		0	0		1	0	
Detector Template	Left	Thru	Thru	Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	50	100		0	0		20	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
16: Pearland Parkway & Province Village 09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	5.0		3.0	5.0	
Minimum Split (s)	35.0	35.0	35.0	35.0	35.0		25.0	35.0		25.0	35.0	
Total Split (s)	35.0	35.0	35.0	35.0	35.0		25.0	55.0		25.0	55.0	
Total Split (%)	23.3%	23.3%	23.3%	23.3%	23.3%		16.7%	36.7%		16.7%	36.7%	
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0		4.5	4.0		4.5	4.5	
All-Red Time (s)	1.5	1.5	1.5	2.0	2.0		1.5	2.0		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	Max	Max		None	Max		None	None	
Act Effct Green (s)		10.2	10.2		29.4		8.3	50.0		7.1	48.9	
Actuated g/C Ratio		0.09	0.09		0.26		0.07	0.44		0.06	0.43	
v/c Ratio		0.46	0.14		0.20		0.34	0.76		0.22	0.66	
Control Delay (s/veh)		62.0	1.2		11.2		57.3	33.4		57.3	31.0	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		62.0	1.2		11.2		57.3	33.4		57.3	31.0	
LOS		E	A		B		E	C		E	C	
Approach Delay (s/veh)		43.1			11.2			35.1			32.2	
Approach LOS		D			B			D			C	
90th %ile Green (s)	14.3	14.3	14.3	29.0	29.0		10.6	50.5		8.7	48.6	
90th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR		Gap	Hold		Gap	Gap	
70th %ile Green (s)	11.9	11.9	11.9	29.0	29.0		9.3	49.0		7.7	47.4	
70th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	10.2	10.2	10.2	29.0	29.0		8.3	49.0		7.0	47.7	
50th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	8.7	8.7	8.7	29.0	29.0		7.5	49.0		6.4	47.9	
30th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	0.0	0.0	29.0	29.0		0.0	49.0		0.0	49.0	
10th %ile Term Code	Skip	Skip	Skip	MaxR	MaxR		Skip	MaxR		Skip	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 114.9			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 32.5		Intersection LOS: C	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 126.5			
70th %ile Actuated Cycle: 121.6			
50th %ile Actuated Cycle: 119.2			
30th %ile Actuated Cycle: 117.1			
10th %ile Actuated Cycle: 90			

Splits and Phases: 16: Pearland Parkway & Province Village



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Future Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		150	150		150	120		150	450		150
Storage Lanes	1		0	1		0	1		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.95	0.95
Ped Bike Factor												
Frt		0.983			0.961			0.970			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3401	0	1770	3433	0	3433	3433	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3479	0	1770	3401	0	1770	3433	0	3433	3433	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			32			16			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1215			1637			473			570	
Travel Time (s)		27.6			37.2			10.8			13.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	147	1176	154	203	1374	486	212	633	161	409	472	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	1330	0	203	1860	0	212	794	0	409	592	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		0	2		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	100		0	100		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases												
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												

Lanes, Volumes, Timings
17: Pearland Parkway & FM 518

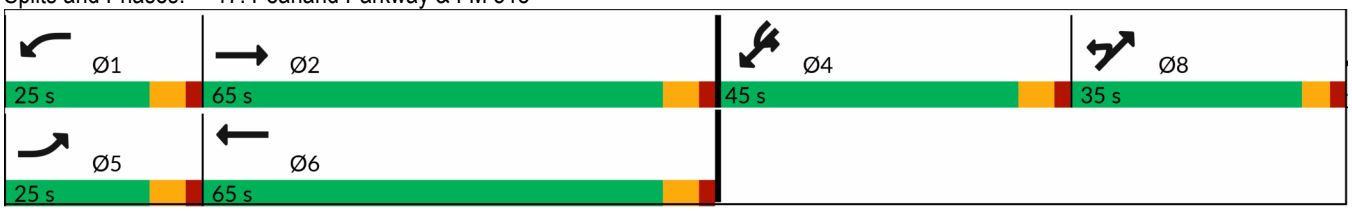
09/16/2024

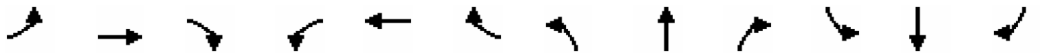
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	3.0	10.0		3.0	10.0		5.0	5.0		7.0	7.0	
Minimum Split (s)	20.0	45.0		20.0	45.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	65.0		25.0	65.0		35.0	35.0		45.0	45.0	
Total Split (%)	14.7%	38.2%		14.7%	38.2%		20.6%	20.6%		26.5%	26.5%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		5.5	5.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)	16.9	58.5		18.5	60.1		29.5	29.5		32.7	32.7	
Actuated g/C Ratio	0.10	0.36		0.11	0.37		0.18	0.18		0.20	0.20	
v/c Ratio	0.81	1.07		1.02	1.47		0.67	1.26		0.60	0.85	
Control Delay (s/veh)	103.1	95.1		138.4	252.6		75.0	181.1		63.6	73.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	103.1	95.1		138.4	252.6		75.0	181.1		63.6	73.9	
LOS	F	F		F	F		E	F		E	E	
Approach Delay (s/veh)		95.9			241.3			158.8			69.7	
Approach LOS		F			F			F			E	
90th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		38.5	38.5	
90th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Max	Max	
70th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		37.0	37.0	
70th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Gap	Gap	
50th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		33.6	33.6	
50th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Gap	Gap	
30th %ile Green (s)	16.7	58.5		18.5	60.3		29.5	29.5		30.3	30.3	
30th %ile Term Code	Gap	Max		Max	Hold		MaxR	MaxR		Gap	Gap	
10th %ile Green (s)	12.6	58.5		18.5	64.4		29.5	29.5		24.8	24.8	
10th %ile Term Code	Gap	Max		Max	Hold		MaxR	MaxR		Gap	Gap	

Intersection Summary

Area Type:	Other		
Cycle Length: 170			
Actuated Cycle Length: 164.3			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.47			
Intersection Signal Delay (s/veh): 156.6		Intersection LOS: F	
Intersection Capacity Utilization 109.1%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 170			
70th %ile Actuated Cycle: 168.5			
50th %ile Actuated Cycle: 165.1			
30th %ile Actuated Cycle: 161.8			
10th %ile Actuated Cycle: 156.3			

Splits and Phases: 17: Pearland Parkway & FM 518





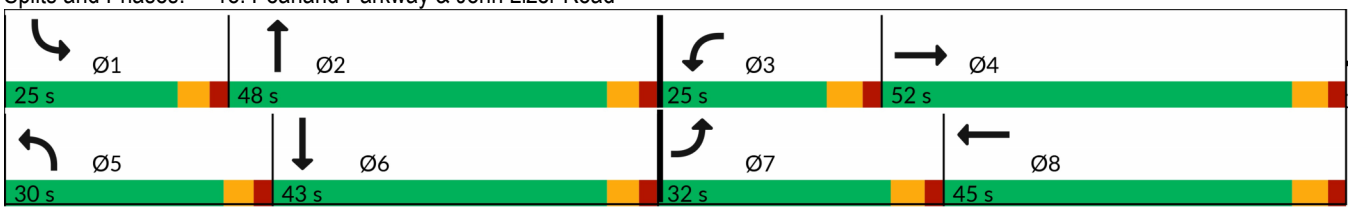
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	348	132	145	247	18	232	576	222	22	440	229
Future Volume (vph)	330	348	132	145	247	18	232	576	222	22	440	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		100	100		100	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.959			0.990			0.958			0.949	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3394	0	1770	3504	0	1770	3391	0	1770	3359	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3394	0	1770	3504	0	1770	3391	0	1770	3359	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			5			38			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1007			1264			3595			815	
Travel Time (s)		22.9			28.7			81.7			18.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	359	378	143	158	268	20	252	626	241	24	478	249
Shared Lane Traffic (%)												
Lane Group Flow (vph)	359	521	0	158	288	0	252	867	0	24	727	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			72			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		1	2		1	0		0	0	
Detector Template	Thru	Thru		Left	Thru		Left	Thru		Thru	Thru	
Leading Detector (ft)	0	100		20	100		20	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
18: Pearland Parkway & John Lizer Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	45.0		25.0	45.0		30.0	30.0		25.0	25.0	
Total Split (s)	32.0	52.0		25.0	45.0		30.0	48.0		25.0	43.0	
Total Split (%)	21.3%	34.7%		16.7%	30.0%		20.0%	32.0%		16.7%	28.7%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)	26.2	27.2		15.6	16.6		24.7	51.5		7.2	29.1	
Actuated g/C Ratio	0.22	0.23		0.13	0.14		0.21	0.43		0.06	0.24	
v/c Ratio	0.93	0.65		0.69	0.59		0.69	0.59		0.22	0.85	
Control Delay (s/veh)	78.1	44.3		66.8	53.1		56.9	28.4		62.1	49.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	78.1	44.3		66.8	53.1		56.9	28.4		62.1	49.9	
LOS	E	D		E	D		E	C		E	D	
Approach Delay (s/veh)		58.1			58.0			34.8			50.3	
Approach LOS		E			E			C			D	
90th %ile Green (s)	26.0	31.9		19.0	24.9		24.5	52.4		9.6	37.5	
90th %ile Term Code	Max	Gap		Max	Hold		MaxR	Hold		Gap	Max	
70th %ile Green (s)	26.0	27.0		19.0	20.0		24.5	49.6		8.1	33.2	
70th %ile Term Code	Max	Gap		Max	Hold		MaxR	Hold		Gap	Gap	
50th %ile Green (s)	26.0	24.7		16.5	15.2		24.5	46.7		7.1	29.3	
50th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Gap	Gap	
30th %ile Green (s)	26.0	25.5		13.8	13.3		24.5	55.5		0.0	25.5	
30th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Skip	Gap	
10th %ile Green (s)	26.0	26.4		10.5	10.9		24.5	51.2		0.0	21.2	
10th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Skip	Gap	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 119.7			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay (s/veh): 48.1		Intersection LOS: D	
Intersection Capacity Utilization 77.2%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 135.9			
70th %ile Actuated Cycle: 126.7			
50th %ile Actuated Cycle: 118			
30th %ile Actuated Cycle: 112.3			
10th %ile Actuated Cycle: 105.6			

Splits and Phases: 18: Pearland Parkway & John Lizer Road



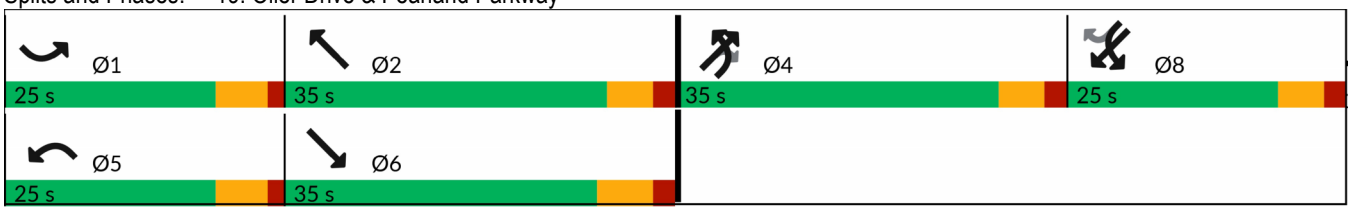
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	56	235	326	329	568	25	286	30	281	286	30	281
Future Volume (vph)	56	235	326	329	568	25	286	30	281	286	30	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	280		0	0		0
Storage Lanes	1		0	2		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.913			0.994				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.961			0.957	
Satd. Flow (prot)	1770	3231	0	3433	3518	0	1681	1701	1583	0	1783	1583
Flt Permitted	0.950			0.950			0.950	0.961			0.957	
Satd. Flow (perm)	1770	3231	0	3433	3518	0	1681	1701	1583	0	1783	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		272			3				305			305
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3595			633			834			931	
Travel Time (s)		81.7			14.4			19.0			21.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	61	255	354	358	617	27	311	33	305	311	33	305
Shared Lane Traffic (%)							45%					
Lane Group Flow (vph)	61	609	0	358	644	0	171	173	305	0	344	305
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		62			62			60			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		8	8	
Permitted Phases									4			8
Detector Phase	1	6		5	2		4	4	4	8	8	8
Switch Phase												

Lanes, Volumes, Timings
19: Oiler Drive & Pearland Parkway 09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	15.0		5.0	20.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	35.0		25.0	35.0		35.0	35.0	35.0	25.0	25.0	25.0
Total Split (s)	25.0	35.0		25.0	35.0		35.0	35.0	35.0	25.0	25.0	25.0
Total Split (%)	20.8%	29.2%		20.8%	29.2%		29.2%	29.2%	29.2%	20.8%	20.8%	20.8%
Yellow Time (s)	4.5	5.0		4.5	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	2.0		1.5	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	7.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Max		None	None		None	None	None	None	None	None
Act Effct Green (s)	9.1	28.2		15.7	38.5		17.7	17.7	17.7		19.1	19.1
Actuated g/C Ratio	0.09	0.27		0.15	0.36		0.17	0.17	0.17		0.18	0.18
v/c Ratio	0.40	0.58		0.70	0.50		0.61	0.61	0.59		1.07	0.57
Control Delay (s/veh)	55.7	21.5		51.6	30.2		50.6	50.4	9.4		113.2	9.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	55.7	21.5		51.6	30.2		50.6	50.4	9.4		113.2	9.5
LOS	E	C		D	C		D	D	A		F	A
Approach Delay (s/veh)		24.6			37.8			31.2			64.5	
Approach LOS		C			D			C			E	
90th %ile Green (s)	13.0	28.0		19.0	35.0		26.8	26.8	26.8	19.0	19.0	19.0
90th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Max	Max	Max
70th %ile Green (s)	10.6	28.0		18.6	37.0		21.7	21.7	21.7	19.0	19.0	19.0
70th %ile Term Code	Gap	MaxR		Gap	Hold		Gap	Gap	Gap	Max	Max	Max
50th %ile Green (s)	9.1	28.0		16.2	36.1		17.9	17.9	17.9	19.0	19.0	19.0
50th %ile Term Code	Gap	MaxR		Gap	Hold		Gap	Gap	Gap	Max	Max	Max
30th %ile Green (s)	7.6	28.0		14.1	35.5		14.2	14.2	14.2	19.0	19.0	19.0
30th %ile Term Code	Gap	MaxR		Gap	Hold		Gap	Gap	Gap	Max	Max	Max
10th %ile Green (s)	0.0	28.0		11.4	46.4		9.8	9.8	9.8	19.0	19.0	19.0
10th %ile Term Code	Skip	MaxR		Gap	Hold		Gap	Gap	Gap	Max	Max	Max

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 105.9			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay (s/veh): 39.2		Intersection LOS: D	
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 117.8			
70th %ile Actuated Cycle: 112.3			
50th %ile Actuated Cycle: 106.1			
30th %ile Actuated Cycle: 100.3			
10th %ile Actuated Cycle: 93.2			

Splits and Phases: 19: Oiler Drive & Pearland Parkway



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	515	86	139	1104	733	540
Future Volume (vph)	515	86	139	1104	733	540
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	250			150
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.850			0.936	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	5085	4760	0
Flt Permitted	0.950		0.120			
Satd. Flow (perm)	3433	1583	224	5085	4760	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		93			201	
Link Speed (mph)	30			30	30	
Link Distance (ft)	884			1122	1114	
Travel Time (s)	20.1			25.5	25.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	560	93	151	1200	797	587
Shared Lane Traffic (%)						
Lane Group Flow (vph)	560	93	151	1200	1384	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	54			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	6		7	4	8	
Permitted Phases		6	4			
Detector Phase	6	6	7	4	8	
Switch Phase						

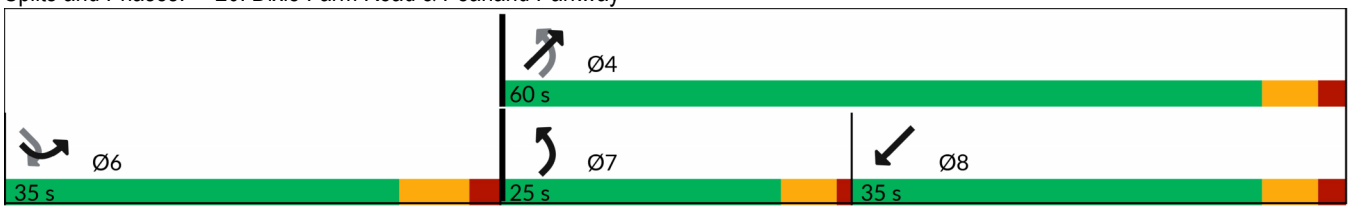


Lane Group	SEL	SER	NEL	NET	SWT	SWR
Minimum Initial (s)	20.0	20.0	5.0	15.0	5.0	
Minimum Split (s)	35.0	35.0	25.0	35.0	35.0	
Total Split (s)	35.0	35.0	25.0	60.0	35.0	
Total Split (%)	36.8%	36.8%	26.3%	63.2%	36.8%	
Yellow Time (s)	5.0	5.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Max	Max	None	None	None	
Act Effct Green (s)	28.0	28.0	45.0	44.0	28.3	
Actuated g/C Ratio	0.33	0.33	0.53	0.52	0.33	
v/c Ratio	0.50	0.16	0.48	0.46	0.88dr	
Control Delay (s/veh)	25.3	5.8	16.4	13.5	26.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	25.3	5.8	16.4	13.5	26.7	
LOS	C	A	B	B	C	
Approach Delay (s/veh)	22.5			13.8	26.7	
Approach LOS	C			B	C	
90th %ile Green (s)	28.0	28.0	14.5	48.5	29.0	
90th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
70th %ile Green (s)	28.0	28.0	12.1	46.1	29.0	
70th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
50th %ile Green (s)	28.0	28.0	10.8	44.8	29.0	
50th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
30th %ile Green (s)	28.0	28.0	9.5	43.5	29.0	
30th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
10th %ile Green (s)	28.0	28.0	7.4	37.8	25.4	
10th %ile Term Code	MaxR	MaxR	Gap	Hold	Gap	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 85.1			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay (s/veh): 20.7		Intersection LOS: C	
Intersection Capacity Utilization 65.6%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 89.5			
70th %ile Actuated Cycle: 87.1			
50th %ile Actuated Cycle: 85.8			
30th %ile Actuated Cycle: 84.5			
10th %ile Actuated Cycle: 78.8			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 20: Dixie Farm Road & Pearland Parkway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	459	43	10	1251	44	187	24	10	58	15	163
Future Volume (vph)	135	459	43	10	1251	44	187	24	10	58	15	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	100		0	100		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.987			0.995			0.955			0.862	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3522	0	1770	3380	0	1770	3051	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3493	0	1770	3522	0	1770	3380	0	1770	3051	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			4			11			146	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		930			5111			1029			1098	
Travel Time (s)		21.1			116.2			23.4			25.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	147	499	47	11	1360	48	203	26	11	63	16	177
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	546	0	11	1408	0	203	37	0	63	193	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

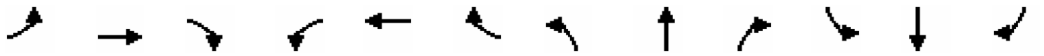
Lanes, Volumes, Timings
21: Smith Ranch Road Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	14.0	38.4		9.6	34.0		13.8	25.9		16.1	28.2	
Total Split (%)	15.6%	42.7%		10.7%	37.8%		15.3%	28.8%		17.9%	31.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	9.4	41.5		5.1	29.5		9.3	26.5		8.6	23.7	
Actuated g/C Ratio	0.10	0.46		0.06	0.33		0.10	0.29		0.10	0.26	
v/c Ratio	0.80	0.34		0.11	1.22		1.12	0.04		0.38	0.21	
Control Delay (s/veh)	70.5	16.4		42.9	134.3		140.0	20.0		43.8	8.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	70.5	16.4		42.9	134.3		140.0	20.0		43.8	8.5	
LOS	E	B		D	F		F	B		D	A	
Approach Delay (s/veh)		27.9			133.6			121.5			17.2	
Approach LOS		C			F			F			B	
90th %ile Green (s)	9.5	33.9		5.1	29.5		9.3	21.4		11.6	23.7	
90th %ile Term Code	Max	Hold		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	9.5	43.5		0.0	29.5		9.3	23.2		9.8	23.7	
70th %ile Term Code	Max	Hold		Skip	Max		Max	Hold		Gap	MaxR	
50th %ile Green (s)	9.5	43.5		0.0	29.5		9.3	24.4		8.6	23.7	
50th %ile Term Code	Max	Hold		Skip	Max		Max	Hold		Gap	MaxR	
30th %ile Green (s)	9.5	43.5		0.0	29.5		9.3	25.7		7.3	23.7	
30th %ile Term Code	Max	Hold		Skip	Max		Max	Hold		Gap	MaxR	
10th %ile Green (s)	8.9	42.9		0.0	29.5		9.3	37.5		0.0	23.7	
10th %ile Term Code	Gap	Hold		Skip	Max		Max	Hold		Skip	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.22			
Intersection Signal Delay (s/veh): 92.9		Intersection LOS: F	
Intersection Capacity Utilization 74.5%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 90			
70th %ile Actuated Cycle: 90			
50th %ile Actuated Cycle: 90			
30th %ile Actuated Cycle: 90			
10th %ile Actuated Cycle: 89.4			

Splits and Phases: 21: Smith Ranch Road Road & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	534	4	4	878	112	6	0	4	80	1	117
Future Volume (vph)	108	534	4	4	878	112	6	0	4	80	1	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	40		0	350		0	80		150	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.999			0.983			0.850			0.852	0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3536	0	1770	3479	0	1770	3008	0	1770	2888	1441
Flt Permitted	0.165			0.398			0.710			0.665		
Satd. Flow (perm)	307	3536	0	741	3479	0	1323	3008	0	1239	2888	1441
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			21			366			384	384
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5111			6249			1160			437	
Travel Time (s)		116.2			142.0			26.4			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	117	580	4	4	954	122	7	0	4	87	1	127
Shared Lane Traffic (%)												50%
Lane Group Flow (vph)	117	584	0	4	1076	0	7	4	0	87	65	63
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												

Lanes, Volumes, Timings
22: CR 90 & Bailey Road

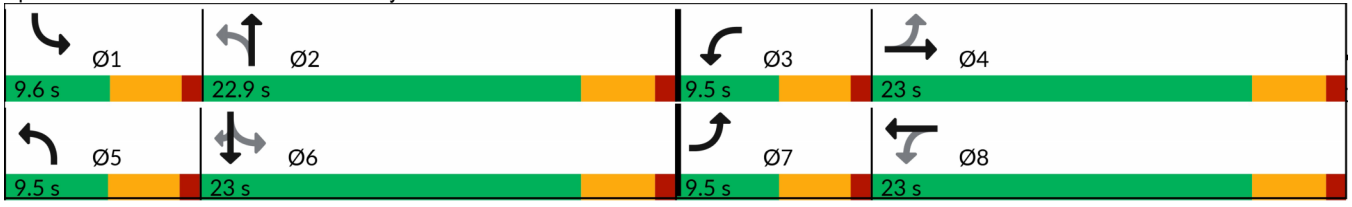
09/16/2024

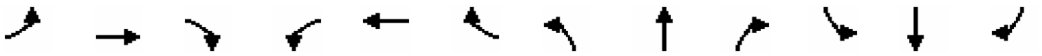
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	9.5	23.0		9.5	23.0		9.5	22.9		9.6	23.0	23.0
Total Split (%)	14.6%	35.4%		14.6%	35.4%		14.6%	35.2%		14.8%	35.4%	35.4%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max		None	Max	Max
Act Effct Green (s)	25.2	24.2		22.6	18.9		22.5	18.8		25.2	24.2	24.2
Actuated g/C Ratio	0.41	0.40		0.37	0.31		0.37	0.31		0.41	0.40	0.40
v/c Ratio	0.47	0.42		0.01	0.99		0.01	0.00		0.16	0.05	0.08
Control Delay (s/veh)	18.4	15.7		10.8	50.7		10.8	0.0		12.0	0.1	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	18.4	15.7		10.8	50.7		10.8	0.0		12.0	0.1	0.2
LOS	B	B		B	D		B	A		B	A	A
Approach Delay (s/veh)		16.1			50.5			6.9			4.9	
Approach LOS		B			D			A			A	
90th %ile Green (s)	5.0	18.5		5.0	18.5		5.0	18.4		5.1	18.5	18.5
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	MaxR
70th %ile Green (s)	5.0	28.0		0.0	18.5		0.0	18.4		5.1	28.0	28.0
70th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
50th %ile Green (s)	5.0	28.0		0.0	18.5		0.0	18.4		5.1	28.0	28.0
50th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
30th %ile Green (s)	5.0	28.0		0.0	18.5		0.0	18.4		5.1	28.0	28.0
30th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
10th %ile Green (s)	0.0	18.5		0.0	18.5		0.0	18.5		0.0	18.5	18.5
10th %ile Term Code	Skip	Hold		Skip	Max		Skip	Hold		Skip	MaxR	MaxR

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 61.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay (s/veh): 33.4 Intersection LOS: C
Intersection Capacity Utilization 56.2% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 65
70th %ile Actuated Cycle: 65
50th %ile Actuated Cycle: 65
30th %ile Actuated Cycle: 65
10th %ile Actuated Cycle: 46

Splits and Phases: 22: CR 90 & Bailey Road





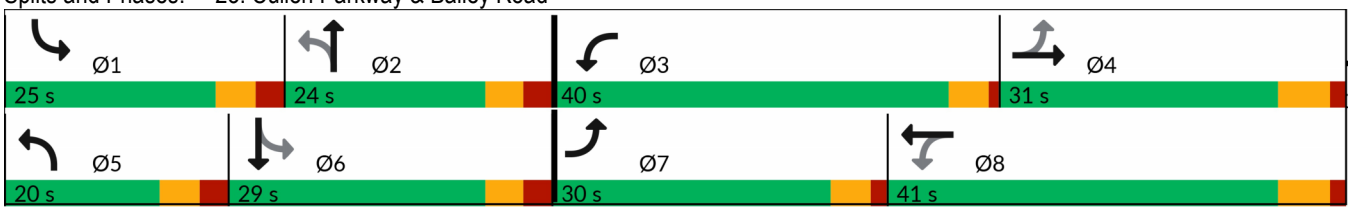
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	592	31	40	786	123	37	75	73	73	49	64
Future Volume (vph)	71	592	31	40	786	123	37	75	73	73	49	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	300		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.992			0.980			0.926			0.915	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3511	0	1770	3468	0	1770	3277	0	1770	3238	0
Flt Permitted	0.121			0.338			0.674			0.592		
Satd. Flow (perm)	225	3511	0	630	3468	0	1255	3277	0	1103	3238	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			15			79			70	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		6249			5290			1720			1280	
Travel Time (s)		142.0			120.2			39.1			29.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	77	643	34	43	854	134	40	82	79	79	53	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	677	0	43	988	0	40	161	0	79	123	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

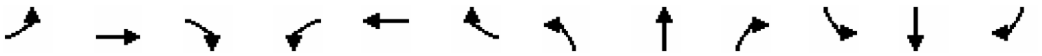
Lanes, Volumes, Timings
23: Cullen Parkway & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	30.0		40.0	40.0		20.0	24.0		25.0	25.0	
Total Split (s)	30.0	31.0		40.0	41.0		20.0	24.0		25.0	29.0	
Total Split (%)	25.0%	25.8%		33.3%	34.2%		16.7%	20.0%		20.8%	24.2%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.0	1.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		4.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	42.5	36.4		39.2	32.6		27.5	22.1		30.7	25.7	
Actuated g/C Ratio	0.48	0.41		0.44	0.37		0.31	0.25		0.35	0.29	
v/c Ratio	0.30	0.47		0.12	0.77		0.09	0.18		0.18	0.12	
Control Delay (s/veh)	15.3	21.5		12.7	30.4		20.7	17.8		21.5	15.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.3	21.5		12.7	30.4		20.7	17.8		21.5	15.1	
LOS	B	C		B	C		C	B		C	B	
Approach Delay (s/veh)		20.8			29.7			18.4			17.6	
Approach LOS		C			C			B			B	
90th %ile Green (s)	10.7	38.2		8.0	35.0		8.7	20.9		10.8	23.0	
90th %ile Term Code	Gap	Hold		Gap	Max		Gap	Hold		Gap	MaxR	
70th %ile Green (s)	9.1	37.4		7.2	35.0		7.6	21.3		9.3	23.0	
70th %ile Term Code	Gap	Hold		Gap	Max		Gap	Hold		Gap	MaxR	
50th %ile Green (s)	8.2	37.1		6.6	35.0		6.9	21.7		8.2	23.0	
50th %ile Term Code	Gap	Hold		Gap	Max		Gap	Hold		Gap	MaxR	
30th %ile Green (s)	7.6	46.9		0.0	34.3		0.0	18.0		7.3	31.3	
30th %ile Term Code	Gap	Hold		Skip	Gap		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	22.5		0.0	22.5		0.0	23.0		0.0	23.0	
10th %ile Term Code	Skip	Hold		Skip	Gap		Skip	Hold		Skip	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 88.4			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 24.5		Intersection LOS: C	
Intersection Capacity Utilization 57.3%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 100.4			
70th %ile Actuated Cycle: 97.7			
50th %ile Actuated Cycle: 96.1			
30th %ile Actuated Cycle: 90.2			
10th %ile Actuated Cycle: 57.5			

Splits and Phases: 23: Cullen Parkway & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	524	70	145	622	221	187	385	212	238	256	207
Future Volume (vph)	195	524	70	145	622	221	187	385	212	238	256	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	220		0	330		330	300		300
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.982			0.961			0.947			0.933	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3401	0	1770	3352	0	1770	3302	0
Flt Permitted	0.137			0.296			0.361			0.171		
Satd. Flow (perm)	255	3476	0	551	3401	0	672	3352	0	319	3302	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			43			85			167	
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		5290			5252			1738			1472	
Travel Time (s)		80.2			79.6			21.5			18.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	212	570	76	158	676	240	203	418	230	259	278	225
Shared Lane Traffic (%)												
Lane Group Flow (vph)	212	646	0	158	916	0	203	648	0	259	503	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

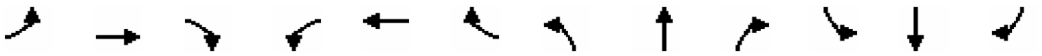
Lanes, Volumes, Timings
24: Manvel Road Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	32.0		25.0	32.0		25.0	28.0		25.0	28.0	
Total Split (%)	22.7%	29.1%		22.7%	29.1%		22.7%	25.5%		22.7%	25.5%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	44.2	29.3		37.9	26.1		36.1	22.1		39.8	24.0	
Actuated g/C Ratio	0.45	0.30		0.38	0.26		0.36	0.22		0.40	0.24	
v/c Ratio	0.65	0.62		0.46	0.99		0.52	0.80		0.75	0.54	
Control Delay (s/veh)	28.5	33.6		21.3	62.9		24.0	41.0		35.7	24.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	28.5	33.6		21.3	62.9		24.0	41.0		35.7	24.8	
LOS	C	C		C	E		C	D		D	C	
Approach Delay (s/veh)		32.3			56.8			36.9			28.5	
Approach LOS		C			E			D			C	
90th %ile Green (s)	20.0	30.9		15.1	26.0		18.5	22.0		20.0	23.5	
90th %ile Term Code	Max	Hold		Gap	Max		Gap	MaxR		Max	Hold	
70th %ile Green (s)	15.9	29.5		12.4	26.0		15.1	22.0		17.8	24.7	
70th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	13.6	29.0		10.6	26.0		12.7	22.0		14.9	24.2	
50th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	11.7	28.6		9.1	26.0		10.8	22.0		12.6	23.8	
30th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	9.3	28.0		7.3	26.0		8.5	22.0		9.8	23.3	
10th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 99.1			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay (s/veh): 40.0		Intersection LOS: D	
Intersection Capacity Utilization 84.0%		ICU Level of Service E	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 110			
70th %ile Actuated Cycle: 103.7			
50th %ile Actuated Cycle: 98.5			
30th %ile Actuated Cycle: 94.3			
10th %ile Actuated Cycle: 89.1			

Splits and Phases: 24: Manvel Road Road & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	841	12	12	787	181	41	59	25	192	25	133
Future Volume (vph)	124	841	12	12	787	181	41	59	25	192	25	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.998			0.972			0.955			0.874	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3532	0	1770	3440	0	1770	3380	0	1770	3093	0
Flt Permitted	0.098			0.268			0.643			0.558		
Satd. Flow (perm)	183	3532	0	499	3440	0	1198	3380	0	1039	3093	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			25			27			145	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5252			5253			1557			1503	
Travel Time (s)		119.4			119.4			35.4			34.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	135	914	13	13	855	197	45	64	27	209	27	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	135	927	0	13	1052	0	45	91	0	209	172	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
25: Harkey Road & Bailey Road

09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	45.0		25.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	20.8%	37.5%		20.8%	37.5%		20.8%	20.8%		20.8%	20.8%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	54.0	50.9		43.5	36.6		27.4	19.2		39.4	28.6	
Actuated g/C Ratio	0.52	0.49		0.42	0.35		0.26	0.19		0.38	0.28	
v/c Ratio	0.50	0.53		0.05	0.85		0.13	0.14		0.42	0.18	
Control Delay (s/veh)	21.6	20.5		13.8	39.0		23.5	28.7		26.3	8.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	21.6	20.5		13.8	39.0		23.5	28.7		26.3	8.6	
LOS	C	C		B	D		C	C		C	A	
Approach Delay (s/veh)		20.6			38.7			27.0			18.3	
Approach LOS		C			D			C			B	
90th %ile Green (s)	14.9	47.2		6.7	39.0		9.3	19.0		20.0	29.7	
90th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Max	Hold	
70th %ile Green (s)	13.3	57.3		0.0	39.0		8.0	19.0		16.4	27.4	
70th %ile Term Code	Gap	Hold		Skip	Max		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	11.7	55.7		0.0	39.0		7.2	19.0		14.1	25.9	
50th %ile Term Code	Gap	Hold		Skip	Max		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	10.1	51.6		0.0	36.5		6.4	19.0		12.1	24.7	
30th %ile Term Code	Gap	Hold		Skip	Gap		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	7.7	42.1		0.0	29.4		0.0	19.0		9.3	33.3	
10th %ile Term Code	Gap	Hold		Skip	Gap		Skip	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 103.5
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay (s/veh): 27.9 Intersection LOS: C
Intersection Capacity Utilization 71.7% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 114.9
70th %ile Actuated Cycle: 109.7
50th %ile Actuated Cycle: 105.8
30th %ile Actuated Cycle: 99.7
10th %ile Actuated Cycle: 87.4

Splits and Phases: 25: Harkey Road & Bailey Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	990	18	28	819	144	16	4	31	129	15	185
Future Volume (vph)	111	990	18	28	819	144	16	4	31	129	15	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	330		0	330		330	150		0	150		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.997			0.997	0.850		0.866			0.861	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3529	0	1770	3380	1441	1770	3065	0	1770	3047	0
Flt Permitted	0.111			0.129			0.616			0.596		
Satd. Flow (perm)	207	3529	0	240	3380	1441	1147	3065	0	1110	3047	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			1	141		490			201	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5253			2652			1736			993	
Travel Time (s)		119.4			60.3			39.5			22.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	121	1076	20	30	890	157	17	4	34	140	16	201
Shared Lane Traffic (%)						10%						
Lane Group Flow (vph)	121	1096	0	30	906	141	17	38	0	140	217	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												

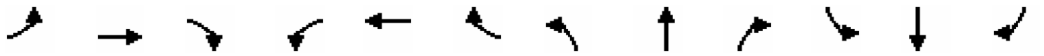
Lanes, Volumes, Timings
26: McLean Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (s)	25.0	35.0		25.0	35.0	35.0	25.0	25.0		25.0	25.0	
Total Split (%)	22.7%	31.8%		22.7%	31.8%	31.8%	22.7%	22.7%		22.7%	22.7%	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Act Effct Green (s)	43.7	36.5		36.4	29.1	29.1	26.1	19.0		35.2	29.7	
Actuated g/C Ratio	0.49	0.41		0.41	0.32	0.32	0.29	0.21		0.39	0.33	
v/c Ratio	0.46	0.76		0.15	0.83	0.25	0.05	0.04		0.27	0.19	
Control Delay (s/veh)	18.6	28.9		14.4	36.5	5.7	18.1	0.1		19.8	5.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	18.6	28.9		14.4	36.5	5.7	18.1	0.1		19.8	5.4	
LOS	B	C		B	D	A	B	A		B	A	
Approach Delay (s/veh)		27.9			31.8			5.6			11.1	
Approach LOS		C			C			A			B	
90th %ile Green (s)	12.5	34.0		7.5	29.0	29.0	7.0	19.0		13.9	25.9	
90th %ile Term Code	Gap	Hold		Gap	Max	Max	Gap	MaxR		Gap	Hold	
70th %ile Green (s)	10.3	32.6		6.7	29.0	29.0	6.4	19.0		11.5	24.1	
70th %ile Term Code	Gap	Hold		Gap	Max	Max	Gap	MaxR		Gap	Hold	
50th %ile Green (s)	9.0	31.8		6.2	29.0	29.0	0.0	19.0		10.1	34.1	
50th %ile Term Code	Gap	Hold		Gap	Max	Max	Skip	MaxR		Gap	Hold	
30th %ile Green (s)	8.4	42.4		0.0	29.0	29.0	0.0	19.0		8.7	32.7	
30th %ile Term Code	Gap	Hold		Skip	Max	Max	Skip	MaxR		Gap	Hold	
10th %ile Green (s)	6.7	40.7		0.0	29.0	29.0	0.0	19.0		7.0	31.0	
10th %ile Term Code	Gap	Hold		Skip	Max	Max	Skip	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 89.6			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 26.8		Intersection LOS: C	
Intersection Capacity Utilization 60.1%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 96.4			
70th %ile Actuated Cycle: 91.8			
50th %ile Actuated Cycle: 89.1			
30th %ile Actuated Cycle: 87.1			
10th %ile Actuated Cycle: 83.7			

Splits and Phases: 26: McLean Road & Bailey Road





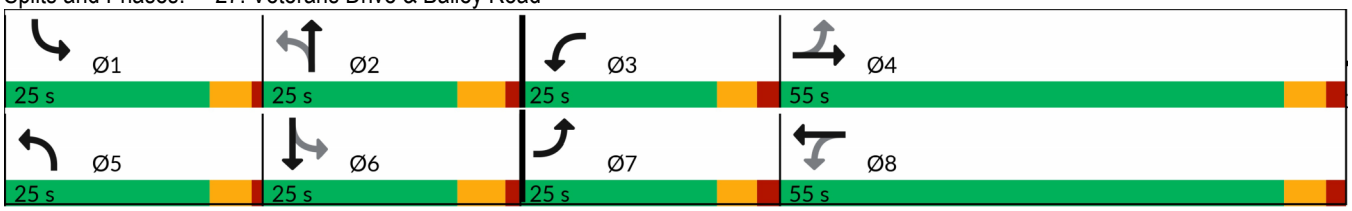
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	779	38	70	573	77	98	207	182	115	81	265
Future Volume (vph)	89	779	38	70	573	77	98	207	182	115	81	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		180	150		150	180		180	250		180
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.993			0.982			0.930			0.885	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3514	0	1770	3476	0	1770	3291	0	1770	3132	0
Flt Permitted	0.250			0.170			0.477			0.395		
Satd. Flow (perm)	466	3514	0	317	3476	0	889	3291	0	736	3132	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			13			143			288	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2652			5774			5367			662	
Travel Time (s)		60.3			131.2			122.0			15.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	97	847	41	76	623	84	107	225	198	125	88	288
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	888	0	76	707	0	107	423	0	125	376	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

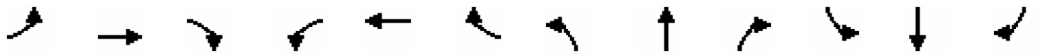
Lanes, Volumes, Timings
27: Veterans Drive & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	12.0		3.0	12.0		3.0	10.0		3.0	12.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	55.0		25.0	55.0		25.0	25.0		25.0	25.0	
Total Split (%)	19.2%	42.3%		19.2%	42.3%		19.2%	19.2%		19.2%	19.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	37.1	30.2		35.2	29.3		30.5	19.7		31.7	20.4	
Actuated g/C Ratio	0.42	0.34		0.40	0.33		0.35	0.22		0.36	0.23	
v/c Ratio	0.30	0.74		0.30	0.61		0.27	0.50		0.33	0.40	
Control Delay (s/veh)	15.3	30.1		16.1	27.3		22.3	24.6		22.9	10.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.3	30.1		16.1	27.3		22.3	24.6		22.9	10.6	
LOS	B	C		B	C		C	C		C	B	
Approach Delay (s/veh)		28.7			26.2			24.1			13.6	
Approach LOS		C			C			C			B	
90th %ile Green (s)	11.4	43.0		9.7	41.3		14.0	19.0		15.1	20.1	
90th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	9.7	34.7		8.3	33.3		11.1	19.0		11.9	19.8	
70th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	8.6	30.0		7.5	28.9		9.5	19.0		10.1	19.6	
50th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	7.6	26.7		6.8	25.9		8.2	19.0		8.6	19.4	
30th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	18.7		0.0	18.7		6.4	19.0		6.7	19.3	
10th %ile Term Code	Skip	Gap		Skip	Hold		Gap	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 88.4			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 24.4		Intersection LOS: C	
Intersection Capacity Utilization 63.7%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 109.8			
70th %ile Actuated Cycle: 96.9			
50th %ile Actuated Cycle: 89.6			
30th %ile Actuated Cycle: 84.1			
10th %ile Actuated Cycle: 61.4			

Splits and Phases: 27: Veterans Drive & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	469	43	247	631	145	160	81	333	189	75	71
Future Volume (vph)	50	469	43	247	631	145	160	81	333	189	75	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	400		150	220		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.987			0.972			0.879			0.927	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3440	0	1770	3111	0	1770	3281	0
Flt Permitted	0.189			0.198			0.651			0.404		
Satd. Flow (perm)	352	3493	0	369	3440	0	1213	3111	0	753	3281	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			17			362			77	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2764			1396			1102			1362	
Travel Time (s)		62.8			31.7			25.0			31.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	54	510	47	268	686	158	174	88	362	205	82	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	557	0	268	844	0	174	450	0	205	159	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
28: Old Alvin Rd & McHard Road

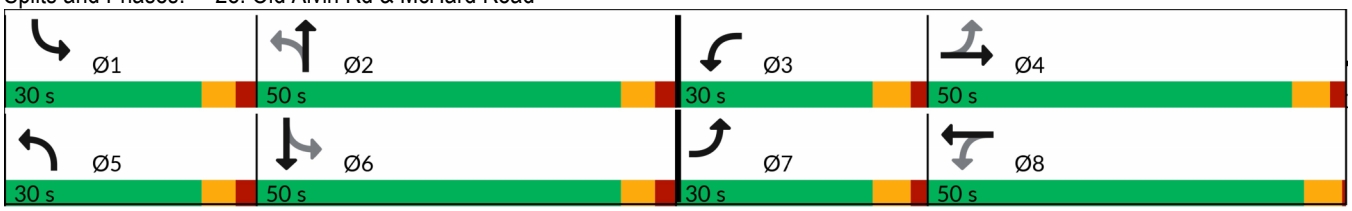
09/16/2024

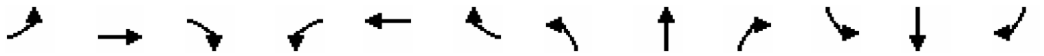
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	20.0	35.0		20.0	35.0		20.0	22.5		20.0	22.5	
Total Split (s)	30.0	50.0		30.0	50.0		30.0	50.0		30.0	50.0	
Total Split (%)	18.8%	31.3%		18.8%	31.3%		18.8%	31.3%		18.8%	31.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	0.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	5.0		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	34.9	26.8		52.2	42.0		57.4	44.0		60.1	45.4	
Actuated g/C Ratio	0.27	0.21		0.40	0.32		0.44	0.34		0.46	0.35	
v/c Ratio	0.30	0.77		0.77	0.76		0.30	0.35		0.44	0.13	
Control Delay (s/veh)	30.1	56.8		42.9	44.8		21.6	8.7		23.5	17.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	30.1	56.8		42.9	44.8		21.6	8.7		23.5	17.6	
LOS	C	E		D	D		C	A		C	B	
Approach Delay (s/veh)		54.4			44.4			12.3			21.0	
Approach LOS		D			D			B			C	
90th %ile Green (s)	10.5	36.8		23.5	51.3		19.1	43.5		21.3	45.7	
90th %ile Term Code	Gap	Gap		Max	Hold		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	9.0	30.6		22.4	45.5		15.5	43.5		17.1	45.1	
70th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	8.1	26.8		19.3	39.5		13.4	43.5		14.8	44.9	
50th %ile Term Code	Gap	Gap		Gap	Gap		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	7.2	23.5		16.6	34.4		11.4	43.5		12.5	44.6	
30th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	18.3		13.0	39.3		8.6	43.5		9.3	44.2	
10th %ile Term Code	Skip	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 160
Actuated Cycle Length: 130.7
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay (s/veh): 36.1 Intersection LOS: D
Intersection Capacity Utilization 73.2% ICU Level of Service D
Analysis Period (min) 15
90th %ile Actuated Cycle: 151.1
70th %ile Actuated Cycle: 139.6
50th %ile Actuated Cycle: 130.4
30th %ile Actuated Cycle: 122.1
10th %ile Actuated Cycle: 110.1

Splits and Phases: 28: Old Alvin Rd & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	244	12	13	118	155	10	469	16	52	225	102
Future Volume (vph)	164	244	12	13	118	155	10	469	16	52	225	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	80		0	80		0	0		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.993			0.915			0.995			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3514	0	1770	3238	0	1770	1853	0	1770	3373	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3514	0	1770	3238	0	1770	1853	0	1770	3373	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			168			1			55	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		647			2722			1670			4252	
Travel Time (s)		14.7			61.9			38.0			96.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	178	265	13	14	128	168	11	510	17	57	245	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	178	278	0	14	296	0	11	527	0	57	356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
29: Mykawa Road & W Orange Street

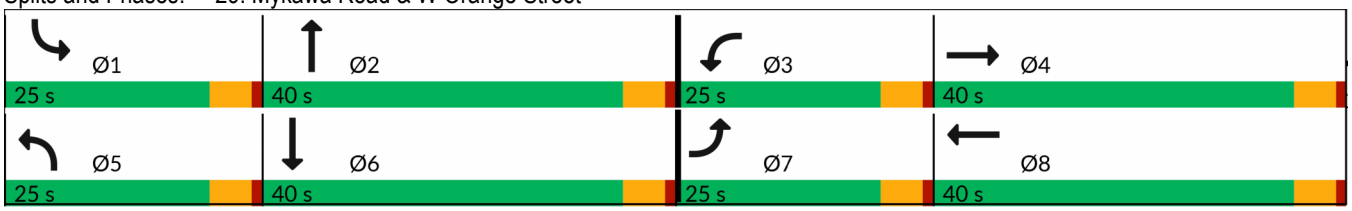
09/16/2024

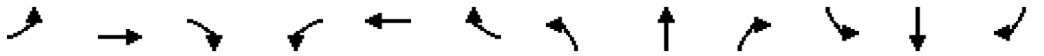
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (%)	19.2%	30.8%		19.2%	30.8%		19.2%	30.8%		19.2%	30.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	14.0	27.7		6.3	10.9		6.2	35.5		8.3	44.1	
Actuated g/C Ratio	0.16	0.32		0.07	0.13		0.07	0.41		0.10	0.51	
v/c Ratio	0.62	0.25		0.11	0.53		0.09	0.69		0.34	0.20	
Control Delay (s/veh)	44.9	23.7		43.1	20.6		43.0	29.3		44.5	11.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	44.9	23.7		43.1	20.6		43.0	29.3		44.5	11.4	
LOS	D	C		D	C		D	C		D	B	
Approach Delay (s/veh)		32.0			21.6			29.6			16.0	
Approach LOS		C			C			C			B	
90th %ile Green (s)	20.0	25.6		7.6	13.2		7.3	35.0		11.4	39.1	
90th %ile Term Code	Max	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	16.4	32.2		0.0	10.8		0.0	35.0		9.5	49.5	
70th %ile Term Code	Gap	Hold		Skip	Gap		Skip	MaxR		Gap	Hold	
50th %ile Green (s)	14.0	29.0		0.0	10.0		0.0	35.0		8.3	48.3	
50th %ile Term Code	Gap	Hold		Skip	Min		Skip	MaxR		Gap	Hold	
30th %ile Green (s)	12.0	27.0		0.0	10.0		0.0	35.0		7.2	47.2	
30th %ile Term Code	Gap	Hold		Skip	Min		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	8.7	23.7		0.0	10.0		0.0	35.0		0.0	35.0	
10th %ile Term Code	Gap	Hold		Skip	Min		Skip	MaxR		Skip	MaxR	

Intersection Summary

Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 86.3			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 25.5		Intersection LOS: C	
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 99.6			
70th %ile Actuated Cycle: 91.7			
50th %ile Actuated Cycle: 87.3			
30th %ile Actuated Cycle: 84.2			
10th %ile Actuated Cycle: 68.7			

Splits and Phases: 29: Mykawa Road & W Orange Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	796	36	203	570	237	43	508	163	274	315	31
Future Volume (vph)	104	796	36	203	570	237	43	508	163	274	315	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	180		150	150		0	180		40
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.994			0.956				0.850		0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	1770	3383	0	1770	1863	1583	1770	3490	0
Flt Permitted	0.240			0.120			0.529			0.179		
Satd. Flow (perm)	447	3518	0	224	3383	0	985	1863	1583	333	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			85				230		12	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1937			1562			4252			883	
Travel Time (s)		44.0			35.5			72.5			15.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	113	865	39	221	620	258	47	552	177	298	342	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	904	0	221	878	0	47	552	177	298	376	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												

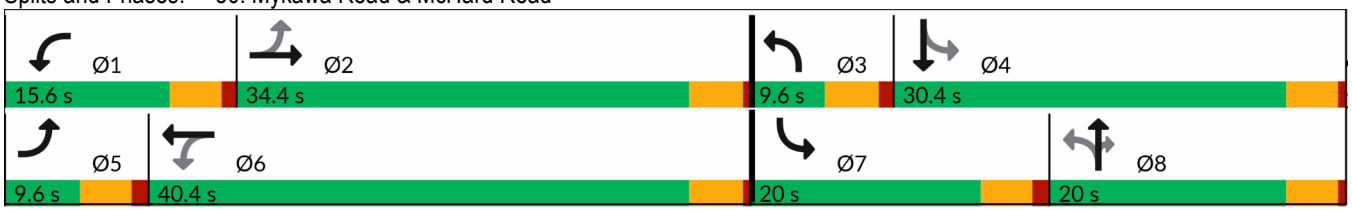
Lanes, Volumes, Timings
30: Mykawa Road & McHard Road

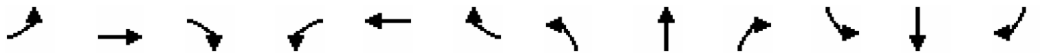
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0	4.0	5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0	20.0	9.5	20.0	
Total Split (s)	9.6	34.4		15.6	40.4		9.6	20.0	20.0	20.0	30.4	
Total Split (%)	10.7%	38.2%		17.3%	44.9%		10.7%	22.2%	22.2%	22.2%	33.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5	0.5	1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0	4.0	4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max		None	None		None	Max	Max	None	None	
Act Effct Green (s)	35.0	30.4		44.9	37.8		20.6	16.0	16.0	35.1	29.9	
Actuated g/C Ratio	0.39	0.34		0.50	0.42		0.23	0.18	0.18	0.39	0.34	
v/c Ratio	0.45	0.75		0.75	0.59		0.17	1.65	0.37	0.80	0.32	
Control Delay (s/veh)	19.0	30.7		33.6	20.2		19.9	332.7	4.2	38.3	23.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	19.0	30.7		33.6	20.2		19.9	332.7	4.2	38.3	23.3	
LOS	B	C		C	C		B	F	A	D	C	
Approach Delay (s/veh)		29.4			22.9			238.8			29.9	
Approach LOS		C			C			F			C	
90th %ile Green (s)	5.1	30.4		11.1	36.4		5.1	16.0	16.0	15.5	26.4	
90th %ile Term Code	Max	MaxR		Max	Max		Max	MaxR	MaxR	Max	Hold	
70th %ile Green (s)	5.1	30.4		11.1	36.4		5.1	16.0	16.0	15.5	26.4	
70th %ile Term Code	Max	MaxR		Max	Hold		Max	MaxR	MaxR	Max	Hold	
50th %ile Green (s)	5.1	30.4		11.1	36.4		5.1	16.0	16.0	15.5	26.4	
50th %ile Term Code	Max	MaxR		Max	Hold		Max	MaxR	MaxR	Max	Hold	
30th %ile Green (s)	5.1	30.4		10.7	36.0		0.0	16.0	16.0	15.5	36.0	
30th %ile Term Code	Max	MaxR		Gap	Hold		Skip	MaxR	MaxR	Max	Hold	
10th %ile Green (s)	0.0	30.4		8.4	43.3		0.0	16.0	16.0	13.5	34.0	
10th %ile Term Code	Skip	MaxR		Gap	Hold		Skip	MaxR	MaxR	Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.65			
Intersection Signal Delay (s/veh): 73.1		Intersection LOS: E	
Intersection Capacity Utilization 90.1%		ICU Level of Service E	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 90			
70th %ile Actuated Cycle: 90			
50th %ile Actuated Cycle: 90			
30th %ile Actuated Cycle: 89.6			
10th %ile Actuated Cycle: 85.3			

Splits and Phases: 30: Mykawa Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	648	56	101	487	44	68	41	154	98	64	15
Future Volume (vph)	6	648	56	101	487	44	68	41	154	98	64	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		0	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.988			0.988			0.882			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3497	0	1770	3122	0	1770	3440	0
Flt Permitted	0.412			0.190			0.698			0.586		
Satd. Flow (perm)	767	3497	0	354	3497	0	1300	3122	0	1092	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			16			167			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2112			2249			716			526	
Travel Time (s)		48.0			51.1			16.3			12.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	7	704	61	110	529	48	74	45	167	107	70	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	765	0	110	577	0	74	212	0	107	86	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
31: Hatfield Road & McHard Road

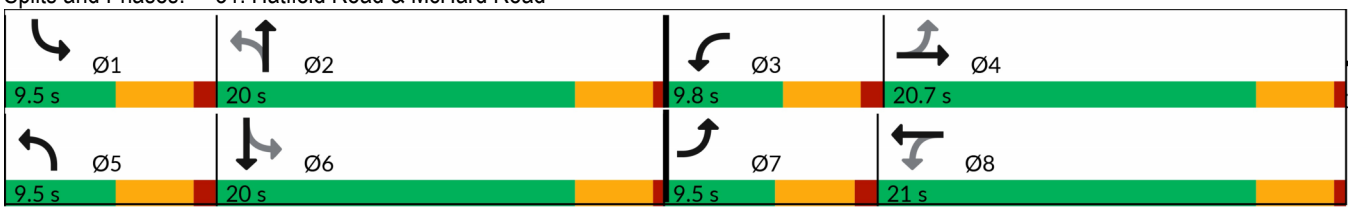
09/16/2024

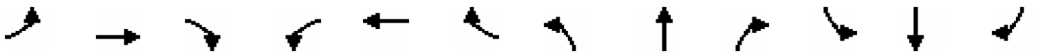
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.7		9.8	21.0		9.5	20.0		9.5	20.0	
Total Split (%)	15.8%	34.5%		16.3%	35.0%		15.8%	33.3%		15.8%	33.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	18.8	15.7		21.6	21.1		19.9	16.8		20.7	18.5	
Actuated g/C Ratio	0.34	0.29		0.39	0.38		0.36	0.31		0.38	0.34	
v/c Ratio	0.02	0.76		0.39	0.43		0.14	0.20		0.22	0.07	
Control Delay (s/veh)	10.0	24.8		14.8	14.1		11.7	6.0		12.5	13.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.0	24.8		14.8	14.1		11.7	6.0		12.5	13.9	
LOS	A	C		B	B		B	A		B	B	
Approach Delay (s/veh)		24.7			14.2			7.5			13.1	
Approach LOS		C			B			A			B	
90th %ile Green (s)	5.0	16.7		5.3	17.0		5.0	16.0		5.0	16.0	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	0.0	16.7		5.3	26.5		5.0	16.0		5.0	16.0	
70th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Hold	
50th %ile Green (s)	0.0	16.7		5.3	26.5		5.0	16.0		5.0	16.0	
50th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Hold	
30th %ile Green (s)	0.0	16.7		5.3	26.5		0.0	16.0		5.0	25.5	
30th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Max	Hold	
10th %ile Green (s)	0.0	10.9		0.0	10.9		0.0	16.0		0.0	16.0	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 55
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay (s/veh): 17.3 Intersection LOS: B
Intersection Capacity Utilization 50.6% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 60
70th %ile Actuated Cycle: 60
50th %ile Actuated Cycle: 60
30th %ile Actuated Cycle: 60
10th %ile Actuated Cycle: 34.9

Splits and Phases: 31: Hatfield Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	469	40	56	462	25	158	37	167	67	115	129
Future Volume (vph)	15	469	40	56	462	25	158	37	167	67	115	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.988			0.992			0.877			0.921	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3511	0	1770	3104	0	1770	3260	0
Flt Permitted	0.421			0.291			0.542			0.613		
Satd. Flow (perm)	784	3497	0	542	3511	0	1010	3104	0	1142	3260	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			9			182			140	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2019			2112			892			740	
Travel Time (s)		45.9			48.0			20.3			16.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	16	510	43	61	502	27	172	40	182	73	125	140
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	553	0	61	529	0	172	222	0	73	265	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

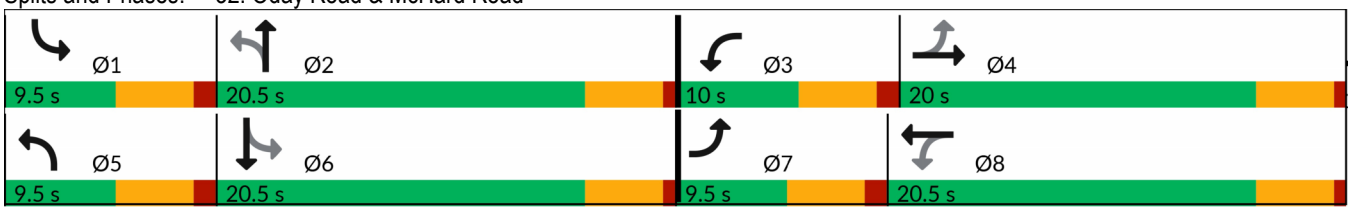
Lanes, Volumes, Timings
32: Oday Road & McHard Road

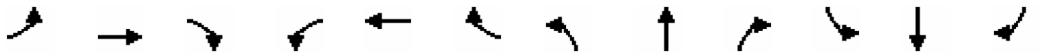
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		10.0	20.5		9.5	20.5		9.5	20.5	
Total Split (%)	15.8%	33.3%		16.7%	34.2%		15.8%	34.2%		15.8%	34.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	14.8	12.9		16.6	16.3		19.8	17.9		18.5	15.2	
Actuated g/C Ratio	0.30	0.26		0.34	0.33		0.40	0.36		0.38	0.31	
v/c Ratio	0.05	0.60		0.18	0.45		0.35	0.18		0.15	0.24	
Control Delay (s/veh)	10.7	19.8		11.8	14.7		13.1	5.4		10.9	8.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.7	19.8		11.8	14.7		13.1	5.4		10.9	8.9	
LOS	B	B		B	B		B	A		B	A	
Approach Delay (s/veh)		19.6			14.4			8.8			9.3	
Approach LOS		B			B			A			A	
90th %ile Green (s)	5.0	16.0		5.5	16.5		5.0	16.5		5.0	16.5	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	0.0	16.0		5.5	26.0		5.0	16.5		5.0	16.5	
70th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Hold	
50th %ile Green (s)	0.0	15.0		5.5	25.0		5.0	16.5		5.0	16.5	
50th %ile Term Code	Skip	Gap		Max	Hold		Max	MaxR		Max	Hold	
30th %ile Green (s)	0.0	9.4		0.0	9.4		5.0	16.5		0.0	7.0	
30th %ile Term Code	Skip	Gap		Skip	Hold		Max	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	8.0		0.0	8.0		0.0	16.5		0.0	16.5	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 49.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay (s/veh): 13.9		Intersection LOS: B	
Intersection Capacity Utilization 48.2%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 60			
70th %ile Actuated Cycle: 60			
50th %ile Actuated Cycle: 59			
30th %ile Actuated Cycle: 33.9			
10th %ile Actuated Cycle: 32.5			

Splits and Phases: 32: Oday Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	477	38	73	525	118	62	129	58	7	19	24
Future Volume (vph)	132	477	38	73	525	118	62	129	58	7	19	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.989			0.973			0.953			0.917	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3500	0	1770	3444	0	1770	3373	0	1770	3245	0
Flt Permitted	0.234			0.331			0.671			0.624		
Satd. Flow (perm)	436	3500	0	617	3444	0	1250	3373	0	1162	3245	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			40			63			26	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2021			2019			1010			1120	
Travel Time (s)		45.9			45.9			23.0			25.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	143	518	41	79	571	128	67	140	63	8	21	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	143	559	0	79	699	0	67	203	0	8	47	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
33: Garden Road & McHard Road

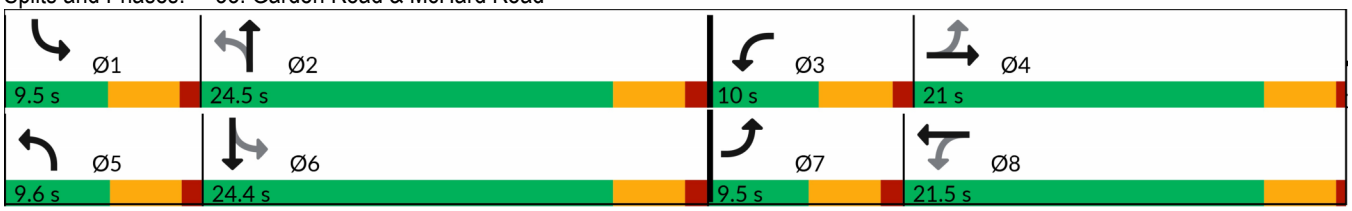
09/16/2024

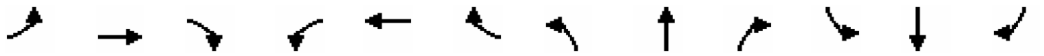
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	9.5	21.0		10.0	21.5		9.6	24.5		9.5	24.4	
Total Split (%)	14.6%	32.3%		15.4%	33.1%		14.8%	37.7%		14.6%	37.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	19.2	17.1		18.8	15.3		25.1	24.2		23.5	20.8	
Actuated g/C Ratio	0.34	0.30		0.33	0.27		0.44	0.42		0.41	0.36	
v/c Ratio	0.53	0.53		0.25	0.74		0.11	0.14		0.02	0.04	
Control Delay (s/veh)	21.5	20.2		13.9	24.3		10.8	9.4		10.0	10.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	21.5	20.2		13.9	24.3		10.8	9.4		10.0	10.0	
LOS	C	C		B	C		B	A		A	A	
Approach Delay (s/veh)		20.5			23.3			9.7			10.0	
Approach LOS		C			C			A			A	
90th %ile Green (s)	5.0	17.0		5.5	17.5		5.1	20.0		5.0	19.9	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	5.0	17.0		5.5	17.5		5.1	29.5		0.0	19.9	
70th %ile Term Code	Max	Max		Max	Max		Max	Hold		Skip	MaxR	
50th %ile Green (s)	5.0	17.0		5.5	17.5		5.1	29.5		0.0	19.9	
50th %ile Term Code	Max	Hold		Max	Max		Max	Hold		Skip	MaxR	
30th %ile Green (s)	5.0	23.9		0.0	14.4		0.0	20.0		0.0	20.0	
30th %ile Term Code	Max	Hold		Skip	Gap		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	9.7		0.0	9.7		0.0	20.0		0.0	20.0	
10th %ile Term Code	Skip	Hold		Skip	Gap		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 57.1
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay (s/veh): 19.7 Intersection LOS: B
Intersection Capacity Utilization 46.5% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 65
70th %ile Actuated Cycle: 65
50th %ile Actuated Cycle: 65
30th %ile Actuated Cycle: 52.4
10th %ile Actuated Cycle: 38.2

Splits and Phases: 33: Garden Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	518	33	77	549	4	38	10	92	12	7	9
Future Volume (vph)	9	518	33	77	549	4	38	10	92	12	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		150	100		0	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.991			0.999			0.865			0.917	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3507	0	1770	3536	0	1770	3061	0	1770	3245	0
Flt Permitted	0.353			0.281			0.717			0.682		
Satd. Flow (perm)	658	3507	0	523	3536	0	1336	3061	0	1270	3245	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1			100			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1957			2021			616			706	
Travel Time (s)		44.5			45.9			14.0			16.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	10	563	36	84	597	4	41	11	100	13	8	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	599	0	84	601	0	41	111	0	13	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

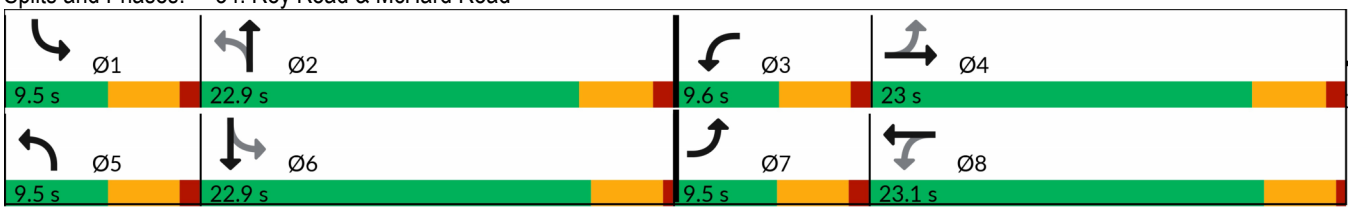
Lanes, Volumes, Timings
34: Roy Road & McHard Road

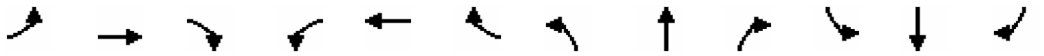
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	5.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	22.5		9.5	20.0	
Total Split (s)	9.5	23.0		9.6	23.1		9.5	22.9		9.5	22.9	
Total Split (%)	14.6%	35.4%		14.8%	35.5%		14.6%	35.2%		14.6%	35.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	1.0		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.5		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	17.2	14.6		18.9	18.6		21.8	21.0		21.1	20.0	
Actuated g/C Ratio	0.33	0.28		0.37	0.36		0.42	0.41		0.41	0.39	
v/c Ratio	0.03	0.60		0.26	0.47		0.07	0.09		0.02	0.01	
Control Delay (s/veh)	10.6	19.8		12.5	14.9		11.2	5.0		11.0	11.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.6	19.8		12.5	14.9		11.2	5.0		11.0	11.6	
LOS	B	B		B	B		B	A		B	B	
Approach Delay (s/veh)		19.6			14.6			6.7			11.4	
Approach LOS		B			B			A			B	
90th %ile Green (s)	5.0	18.5		5.1	19.1		5.0	18.4		5.0	18.9	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	0.0	18.5		5.1	28.6		5.0	27.9		0.0	18.9	
70th %ile Term Code	Skip	Max		Max	Hold		Max	Hold		Skip	MaxR	
50th %ile Green (s)	0.0	14.5		5.1	24.6		0.0	18.4		0.0	18.9	
50th %ile Term Code	Skip	Gap		Max	Hold		Skip	MaxR		Skip	MaxR	
30th %ile Green (s)	0.0	12.9		0.0	13.4		0.0	18.4		0.0	18.9	
30th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	MaxR	
10th %ile Green (s)	0.0	8.8		0.0	9.3		0.0	18.4		0.0	18.9	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 51.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay (s/veh): 15.8		Intersection LOS: B	
Intersection Capacity Utilization 39.7%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 65			
50th %ile Actuated Cycle: 51.5			
30th %ile Actuated Cycle: 40.3			
10th %ile Actuated Cycle: 36.2			

Splits and Phases: 34: Roy Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	447	58	67	528	9	81	28	93	13	10	16
Future Volume (vph)	1	447	58	67	528	9	81	28	93	13	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	120		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.983			0.997			0.884			0.909	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3529	0	1770	3129	0	1770	3217	0
Flt Permitted	0.397			0.319			0.530			0.669		
Satd. Flow (perm)	740	3479	0	594	3529	0	987	3129	0	1246	3217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			3			101			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2239			1957			302			796	
Travel Time (s)		50.9			44.5			6.9			18.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	486	63	73	574	10	88	30	101	14	11	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	549	0	73	584	0	88	131	0	14	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

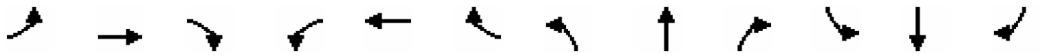
Lanes, Volumes, Timings
35: Max Road/Herridge Road & McHard Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	25.0		10.0	25.5		9.5	20.5		9.5	20.5	
Total Split (%)	14.6%	38.5%		15.4%	39.2%		14.6%	31.5%		14.6%	31.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	15.9	13.3		17.9	17.7		17.7	17.5		13.6	13.5	
Actuated g/C Ratio	0.34	0.29		0.39	0.38		0.38	0.38		0.29	0.29	
v/c Ratio	0.00	0.54		0.19	0.43		0.16	0.11		0.03	0.03	
Control Delay (s/veh)	8.0	16.4		9.5	12.3		12.7	6.4		16.4	12.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	8.0	16.4		9.5	12.3		12.7	6.4		16.4	12.7	
LOS	A	B		A	B		B	A		B	B	
Approach Delay (s/veh)		16.4			12.0			8.9			13.9	
Approach LOS		B			B			A			B	
90th %ile Green (s)	5.0	20.5		5.5	21.5		5.0	16.5		5.0	16.5	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	0.0	15.6		5.5	26.1		16.0	16.5		0.0	0.0	
70th %ile Term Code	Skip	Gap		Max	Hold		Hold	MaxR		Skip	Skip	
50th %ile Green (s)	0.0	13.2		5.5	23.7		16.0	16.5		0.0	0.0	
50th %ile Term Code	Skip	Gap		Max	Hold		Hold	MaxR		Skip	Skip	
30th %ile Green (s)	0.0	10.3		0.0	10.8		0.0	16.5		0.0	16.5	
30th %ile Term Code	Skip	Hold		Skip	Gap		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	8.1		0.0	8.6		0.0	16.5		0.0	16.5	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 46.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay (s/veh): 13.2		Intersection LOS: B	
Intersection Capacity Utilization 40.6%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 50.6			
50th %ile Actuated Cycle: 48.2			
30th %ile Actuated Cycle: 35.3			
10th %ile Actuated Cycle: 33.1			

Splits and Phases: 35: Max Road/Herridge Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	337	237	84	403	327	216	1192	56	155	682	184
Future Volume (vph)	219	337	237	84	403	327	216	1192	56	155	682	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	120		0	300		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.938			0.933			0.993			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3320	0	1770	3302	0	1770	3514	0	1770	3426	0
Flt Permitted	0.103			0.308			0.123			0.080		
Satd. Flow (perm)	192	3320	0	574	3302	0	229	3514	0	149	3426	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			132			3			26	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		283			3590			1925			1330	
Travel Time (s)		6.4			81.6			43.8			30.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	238	366	258	91	438	355	235	1296	61	168	741	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	238	624	0	91	793	0	235	1357	0	168	941	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
36: Cullen Boulevard & McHard Road

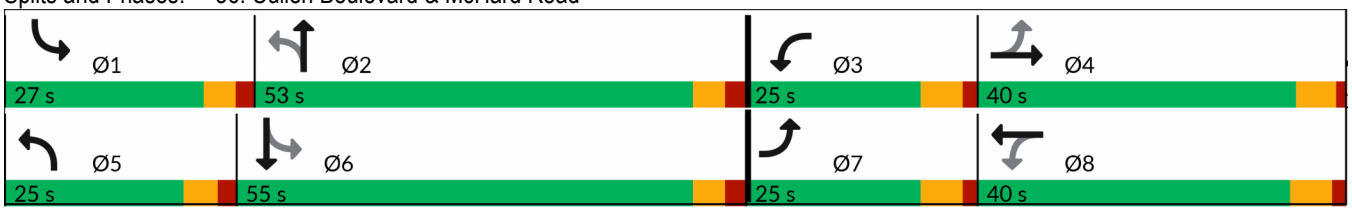
09/16/2024

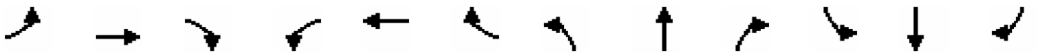
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	7.0		3.0	7.0		3.0	5.0		5.0	3.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	23.5		20.0	23.5	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	53.0		27.0	55.0	
Total Split (%)	17.2%	27.6%		17.2%	27.6%		17.2%	36.6%		18.6%	37.9%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.0		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	56.4	41.0		42.3	32.3		68.6	51.8		64.2	49.7	
Actuated g/C Ratio	0.40	0.29		0.30	0.23		0.49	0.37		0.46	0.36	
v/c Ratio	0.84	0.59		0.35	0.92		0.79	1.04		0.71	0.76	
Control Delay (s/veh)	62.1	37.2		31.3	60.3		47.0	79.4		48.3	44.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	62.1	37.2		31.3	60.3		47.0	79.4		48.3	44.6	
LOS	E	D		C	E		D	E		D	D	
Approach Delay (s/veh)		44.1			57.3			74.6			45.2	
Approach LOS		D			E			E			D	
90th %ile Green (s)	19.0	40.0		13.5	34.0		19.5	47.6		21.4	49.5	
90th %ile Term Code	Max	Hold		Gap	Max		Max	Hold		Gap	MaxR	
70th %ile Green (s)	19.0	42.0		11.5	34.0		19.5	51.5		17.5	49.5	
70th %ile Term Code	Max	Hold		Gap	Max		Max	Hold		Gap	MaxR	
50th %ile Green (s)	19.0	43.4		10.1	34.0		18.6	53.4		14.7	49.5	
50th %ile Term Code	Max	Hold		Gap	Max		Gap	Hold		Gap	MaxR	
30th %ile Green (s)	19.0	44.7		8.6	33.8		15.3	53.2		11.6	49.5	
30th %ile Term Code	Max	Hold		Gap	Gap		Gap	Hold		Gap	MaxR	
10th %ile Green (s)	15.3	35.0		6.8	26.0		11.4	52.4		8.5	49.5	
10th %ile Term Code	Gap	Hold		Gap	Gap		Gap	Hold		Gap	MaxR	

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 140
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay (s/veh): 57.9 Intersection LOS: E
Intersection Capacity Utilization 96.3% ICU Level of Service F
Analysis Period (min) 15
90th %ile Actuated Cycle: 145
70th %ile Actuated Cycle: 145
50th %ile Actuated Cycle: 144.1
30th %ile Actuated Cycle: 140.6
10th %ile Actuated Cycle: 125.2

Splits and Phases: 36: Cullen Boulevard & McHard Road



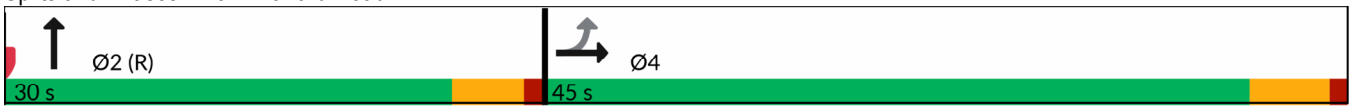


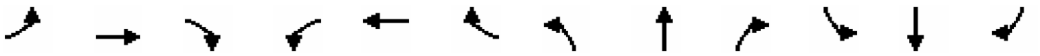
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	753	0	0	0	0	0	61	44	0	0	0
Future Volume (vph)	52	753	0	0	0	0	0	61	44	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.937				
Flt Protected	0.950											
Satd. Flow (prot)	1770	3539	0	0	0	0	0	3316	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	3539	0	0	0	0	0	3316	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	57							48				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		553			824			256			481	
Travel Time (s)		12.6			18.7			5.8			10.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	57	818	0	0	0	0	0	66	48	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	818	0	0	0	0	0	114	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2				
Detector Template	Left	Thru						Thru				
Leading Detector (ft)	20	100						100				
Trailing Detector (ft)	0	0						0				
Turn Type	Perm	NA						NA				
Protected Phases		4						2				
Permitted Phases	4											
Detector Phase	4	4						2				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	20.0	20.0						10.0				
Minimum Split (s)	35.0	35.0						25.0				
Total Split (s)	45.0	45.0						30.0				
Total Split (%)	60.0%	60.0%						40.0%				
Yellow Time (s)	4.5	4.5						4.0				
All-Red Time (s)	1.0	1.0						1.0				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	5.5	5.5						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None						C-Max				
Act Effct Green (s)	26.1	26.1						38.4				
Actuated g/C Ratio	0.35	0.35						0.51				
v/c Ratio	0.09	0.66						0.07				
Control Delay (s/veh)	4.3	23.0						7.3				
Queue Delay	0.0	0.0						0.0				
Total Delay (s/veh)	4.3	23.0						7.3				
LOS	A	C						A				
Approach Delay (s/veh)		21.8						7.3				
Approach LOS		C						A				
90th %ile Green (s)	33.5	33.5						31.0				
90th %ile Term Code	Gap	Gap						Coord				
70th %ile Green (s)	29.4	29.4						35.1				
70th %ile Term Code	Gap	Gap						Coord				
50th %ile Green (s)	25.7	25.7						38.8				
50th %ile Term Code	Gap	Gap						Coord				
30th %ile Green (s)	22.0	22.0						42.5				
30th %ile Term Code	Gap	Gap						Coord				
10th %ile Green (s)	20.0	20.0						44.5				
10th %ile Term Code	Min	Min						Coord				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 20.1		Intersection LOS: C	
Intersection Capacity Utilization 64.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 37: McHard Road



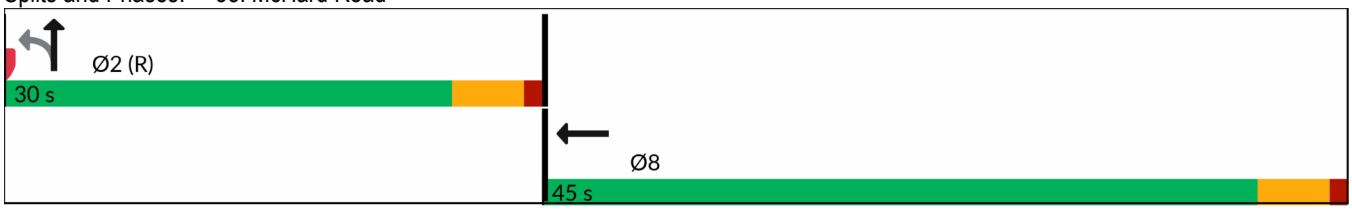


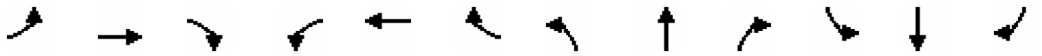
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	816	44	84	62	0	0	0	0
Future Volume (vph)	0	0	0	0	816	44	84	62	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.992							
Flt Protected								0.972				
Satd. Flow (prot)	0	0	0	0	3511	0	0	3440	0	0	0	0
Flt Permitted								0.972				
Satd. Flow (perm)	0	0	0	0	3511	0	0	3440	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					11			91				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			3717			481			228	
Travel Time (s)		14.8			84.5			10.9			5.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	887	48	91	67	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	935	0	0	158	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Turn Type					NA		Perm	NA				
Protected Phases					8			2				
Permitted Phases							2					
Detector Phase					8		2	2				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)					20.0		10.0	10.0				
Minimum Split (s)					35.0		25.0	25.0				
Total Split (s)					45.0		30.0	30.0				
Total Split (%)					60.0%		40.0%	40.0%				
Yellow Time (s)					4.0		4.0	4.0				
All-Red Time (s)					1.0		1.0	1.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode					None		C-Max	C-Max				
Act Effct Green (s)					28.7			36.3				
Actuated g/C Ratio					0.38			0.48				
v/c Ratio					0.69			0.09				
Control Delay (s/veh)					21.5			5.4				
Queue Delay					0.0			0.0				
Total Delay (s/veh)					21.5			5.4				
LOS					C			A				
Approach Delay (s/veh)					21.5			5.4				
Approach LOS					C			A				
90th %ile Green (s)					36.1		28.9	28.9				
90th %ile Term Code					Gap		Coord	Coord				
70th %ile Green (s)					32.0		33.0	33.0				
70th %ile Term Code					Gap		Coord	Coord				
50th %ile Green (s)					29.0		36.0	36.0				
50th %ile Term Code					Gap		Coord	Coord				
30th %ile Green (s)					25.8		39.2	39.2				
30th %ile Term Code					Gap		Coord	Coord				
10th %ile Green (s)					20.6		44.4	44.4				
10th %ile Term Code					Gap		Coord	Coord				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 19.2		Intersection LOS: B	
Intersection Capacity Utilization 40.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 38: McHard Road





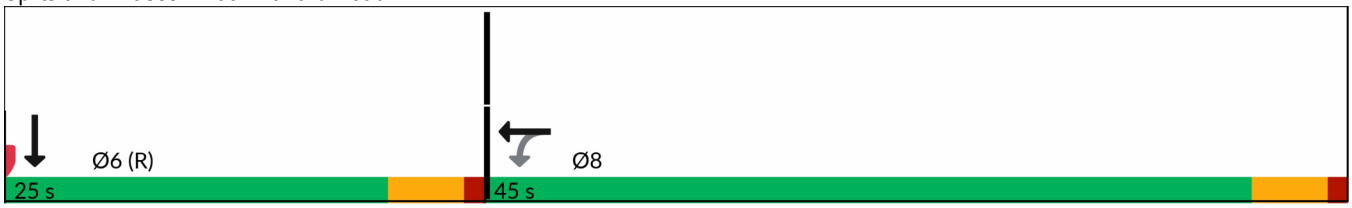
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	37	869	0	0	0	0	0	95	141
Future Volume (vph)	0	0	0	37	869	0	0	0	0	0	95	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt											0.910	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1770	3539	0	0	0	0	0	3221	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1770	3539	0	0	0	0	0	3221	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)				40							123	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1629			651			450			272	
Travel Time (s)		37.0			14.8			10.2			6.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	40	945	0	0	0	0	0	103	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	40	945	0	0	0	0	0	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2						2	
Detector Template				Left	Thru						Thru	
Leading Detector (ft)				20	100						100	
Trailing Detector (ft)				0	0						0	
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Detector Phase				8	8						6	
Switch Phase												

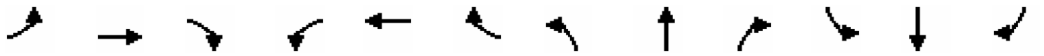
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				20.0	20.0						10.0	
Minimum Split (s)				35.0	35.0						23.0	
Total Split (s)				45.0	45.0						25.0	
Total Split (%)				64.3%	64.3%						35.7%	
Yellow Time (s)				4.0	4.0						4.0	
All-Red Time (s)				1.0	1.0						1.0	
Lost Time Adjust (s)				0.0	0.0						0.0	
Total Lost Time (s)				5.0	5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				None	None						C-Max	
Act Effct Green (s)				28.1	28.1						31.9	
Actuated g/C Ratio				0.40	0.40						0.46	
v/c Ratio				0.05	0.67						0.17	
Control Delay (s/veh)				3.6	19.0						7.5	
Queue Delay				0.0	0.0						0.0	
Total Delay (s/veh)				3.6	19.0						7.5	
LOS				A	B						A	
Approach Delay (s/veh)					18.4						7.5	
Approach LOS					B						A	
90th %ile Green (s)				36.1	36.1						23.9	
90th %ile Term Code				Gap	Gap						Coord	
70th %ile Green (s)				31.6	31.6						28.4	
70th %ile Term Code				Gap	Gap						Coord	
50th %ile Green (s)				28.1	28.1						31.9	
50th %ile Term Code				Gap	Gap						Coord	
30th %ile Green (s)				24.5	24.5						35.5	
30th %ile Term Code				Gap	Gap						Coord	
10th %ile Green (s)				20.0	20.0						40.0	
10th %ile Term Code				Min	Min						Coord	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay (s/veh): 16.1 Intersection LOS: B
Intersection Capacity Utilization 40.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 39: McHard Road



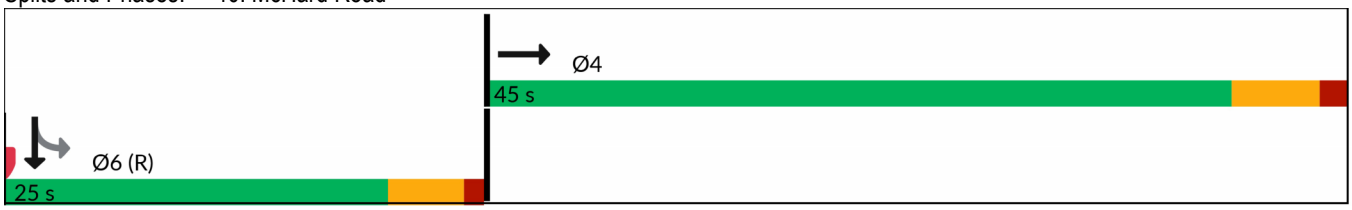


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	702	55	0	0	0	0	0	0	102	27	0
Future Volume (vph)	0	702	55	0	0	0	0	0	0	102	27	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor												
Frt		0.989										
Flt Protected											0.962	
Satd. Flow (prot)	0	3500	0	0	0	0	0	0	0	0	3405	0
Flt Permitted											0.962	
Satd. Flow (perm)	0	3500	0	0	0	0	0	0	0	0	3405	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		19									111	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1663			553			168			450	
Travel Time (s)		37.8			12.6			3.8			10.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	763	60	0	0	0	0	0	0	111	29	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	823	0	0	0	0	0	0	0	0	140	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2								1	2	
Detector Template		Thru								Left	Thru	
Leading Detector (ft)		100								20	100	
Trailing Detector (ft)		0								0	0	
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Detector Phase		4								6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		20.0								10.0	10.0	
Minimum Split (s)		35.0								23.0	23.0	
Total Split (s)		45.0								25.0	25.0	
Total Split (%)		64.3%								35.7%	35.7%	
Yellow Time (s)		4.5								4.0	4.0	
All-Red Time (s)		1.5								1.0	1.0	
Lost Time Adjust (s)		0.0									0.0	
Total Lost Time (s)		6.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None								C-Max	C-Max	
Act Effct Green (s)		24.7									34.3	
Actuated g/C Ratio		0.35									0.49	
v/c Ratio		0.66									0.08	
Control Delay (s/veh)		20.8									2.3	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		20.8									2.3	
LOS		C									A	
Approach Delay (s/veh)		20.8									2.3	
Approach LOS		C									A	
90th %ile Green (s)		31.3								27.7	27.7	
90th %ile Term Code		Gap								Coord	Coord	
70th %ile Green (s)		27.6								31.4	31.4	
70th %ile Term Code		Gap								Coord	Coord	
50th %ile Green (s)		24.2								34.8	34.8	
50th %ile Term Code		Gap								Coord	Coord	
30th %ile Green (s)		20.6								38.4	38.4	
30th %ile Term Code		Gap								Coord	Coord	
10th %ile Green (s)		20.0								39.0	39.0	
10th %ile Term Code		Min								Coord	Coord	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 18.2		Intersection LOS: B	
Intersection Capacity Utilization 38.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 40: McHard Road





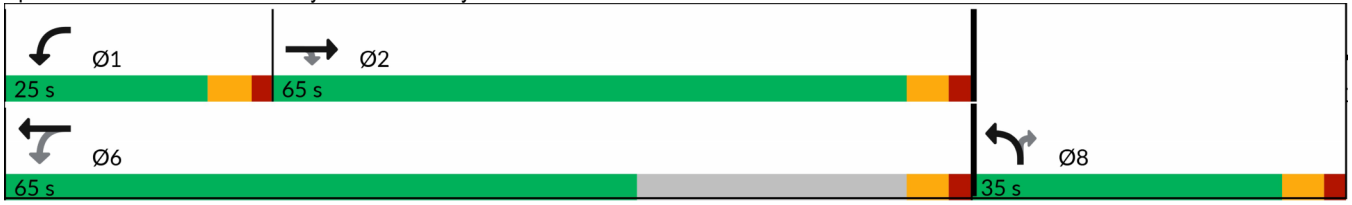
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1236	898	173	1020	321	152
Future Volume (vph)	1236	898	173	1020	321	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	120		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	0.91	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.975	0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3305	1441	1770	3539	1770	1583
Flt Permitted			0.061		0.950	
Satd. Flow (perm)	3305	1441	114	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	24	686				165
Link Speed (mph)	30			30	30	
Link Distance (ft)	975			186	512	
Travel Time (s)	22.2			4.2	11.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1343	976	188	1109	349	165
Shared Lane Traffic (%)		28%				
Lane Group Flow (vph)	1616	703	188	1109	349	165
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						

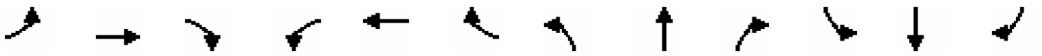
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	20.0	20.0	3.0	20.0	5.0	5.0
Minimum Split (s)	65.0	65.0	20.0	45.0	25.0	25.0
Total Split (s)	65.0	65.0	25.0	65.0	35.0	35.0
Total Split (%)	52.0%	52.0%	20.0%	52.0%	28.0%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Max	Max
Act Effct Green (s)	59.1	59.1	78.4	78.4	29.0	29.0
Actuated g/C Ratio	0.49	0.49	0.66	0.66	0.24	0.24
v/c Ratio	0.98	0.66	0.73	0.48	0.81	0.32
Control Delay (s/veh)	48.2	5.2	42.4	11.0	59.3	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.2	5.2	42.4	11.0	59.3	7.6
LOS	D	A	D	B	E	A
Approach Delay (s/veh)	35.1			15.6	42.7	
Approach LOS	D			B	D	
90th %ile Green (s)	59.0	59.0	19.0	84.0	29.0	29.0
90th %ile Term Code	Max	Max	Max	Hold	MaxR	MaxR
70th %ile Green (s)	59.0	59.0	16.4	81.4	29.0	29.0
70th %ile Term Code	Max	Max	Gap	Hold	MaxR	MaxR
50th %ile Green (s)	59.0	59.0	13.4	78.4	29.0	29.0
50th %ile Term Code	Max	Max	Gap	Hold	MaxR	MaxR
30th %ile Green (s)	59.0	59.0	10.6	75.6	29.0	29.0
30th %ile Term Code	Max	Max	Gap	Hold	MaxR	MaxR
10th %ile Green (s)	59.0	59.0	7.7	72.7	29.0	29.0
10th %ile Term Code	Max	Max	Gap	Hold	MaxR	MaxR

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 119.4
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay (s/veh): 29.9 Intersection LOS: C
Intersection Capacity Utilization 86.1% ICU Level of Service E
Analysis Period (min) 15
90th %ile Actuated Cycle: 125
70th %ile Actuated Cycle: 122.4
50th %ile Actuated Cycle: 119.4
30th %ile Actuated Cycle: 116.6
10th %ile Actuated Cycle: 113.7

Splits and Phases: 41: County Place Parkway & McHard Road



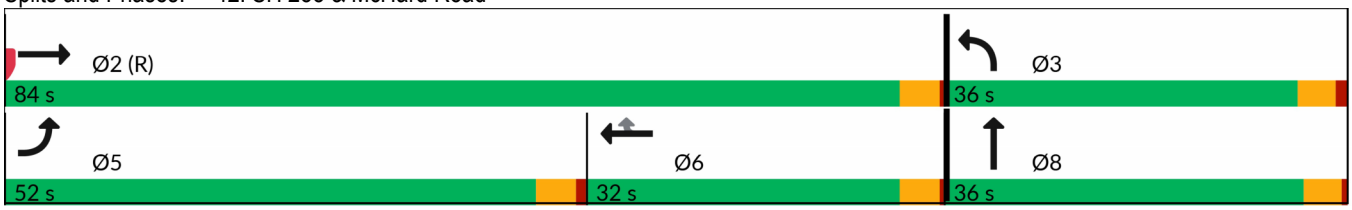


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	789	938	0	0	708	490	795	311	150	0	0	0
Future Volume (vph)	789	938	0	0	708	490	795	311	150	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850		0.951				
Flt Protected	0.950	0.990					0.950					
Satd. Flow (prot)	1610	3356	0	0	5085	1583	1770	3366	0	0	0	0
Flt Permitted	0.950	0.534					0.950					
Satd. Flow (perm)	1610	1810	0	0	5085	1583	1770	3366	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						119		66				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		505			975			278			566	
Travel Time (s)		11.5			22.2			6.3			12.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	858	1020	0	0	770	533	864	338	163	0	0	0
Shared Lane Traffic (%)	29%											
Lane Group Flow (vph)	609	1269	0	0	770	533	864	501	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Turn Type	Prot	NA			NA	Perm	Prot	NA				
Protected Phases	5	2			6		3	8				
Permitted Phases						6						
Detector Phase	5	2			6	6	3	8				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0			4.0	4.0	5.0	4.0				
Minimum Split (s)	9.5	20.0			20.0	20.0	9.5	20.0				
Total Split (s)	52.0	84.0			32.0	32.0	36.0	36.0				
Total Split (%)	43.3%	70.0%			26.7%	26.7%	30.0%	30.0%				
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5				
All-Red Time (s)	1.0	0.5			0.5	0.5	1.0	0.5				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	4.0			4.0	4.0	4.5	4.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	None	C-Max			None	None	None	Max				
Act Effct Green (s)	46.7	80.0			28.8	28.8	31.5	32.0				
Actuated g/C Ratio	0.39	0.67			0.24	0.24	0.26	0.27				
v/c Ratio	0.97	0.96			0.63	1.14	1.86	0.53				
Control Delay (s/veh)	66.1	52.1			43.8	117.4	423.8	34.7				
Queue Delay	35.1	42.9			0.0	0.0	0.0	0.0				
Total Delay (s/veh)	101.2	95.0			43.8	117.4	423.8	34.7				
LOS	F	F			D	F	F	C				
Approach Delay (s/veh)		97.0			73.9			281.0				
Approach LOS		F			E			F				
90th %ile Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
90th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
70th %ile Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
70th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
50th %ile Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
50th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
30th %ile Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
30th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
10th %ile Green (s)	43.7	80.0			31.8	31.8	31.5	32.0				
10th %ile Term Code	Gap	Coord			Coord	Coord	Max	MaxR				

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.86			
Intersection Signal Delay (s/veh): 145.6		Intersection LOS: F	
Intersection Capacity Utilization 83.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 42: SH 288 & McHard Road

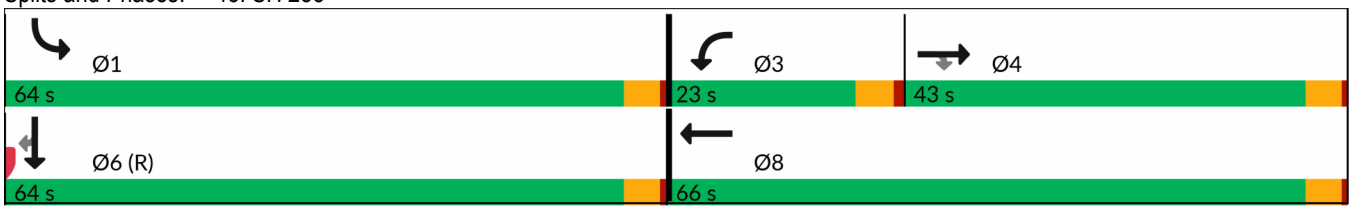


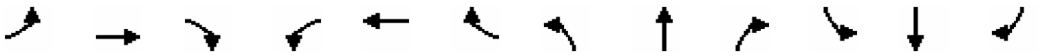
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1261	414	222	1314	0	0	0	0	456	318	650
Future Volume (vph)	0	1261	414	222	1314	0	0	0	0	456	318	650
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			248									46
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		807			505			209			785	
Travel Time (s)		18.3			11.5			4.8			17.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1371	450	241	1428	0	0	0	0	496	346	707
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1371	450	241	1428	0	0	0	0	496	346	707
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Detector Phase		4	4	3	8					1	6	6
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	5.0	4.0					4.0	4.0	4.0
Minimum Split (s)		20.0	20.0	9.5	20.0					20.0	20.0	20.0
Total Split (s)		43.0	43.0	23.0	66.0					64.0	64.0	64.0
Total Split (%)		33.1%	33.1%	17.7%	50.8%					49.2%	49.2%	49.2%
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		0.5	0.5	1.0	0.5					0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0	4.5	4.0					4.0	4.0	4.0
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		None	None	None	None					Max	C-Max	C-Max
Act Effct Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
Actuated g/C Ratio		0.30	0.30	0.14	0.48					0.46	0.46	0.46
v/c Ratio		0.90	0.69	0.96	0.85					0.61	0.21	0.94
Control Delay (s/veh)		52.6	23.7	102.7	35.8					30.1	21.3	52.1
Queue Delay		0.0	0.0	0.0	47.6					0.0	0.0	0.0
Total Delay (s/veh)		52.6	23.7	102.7	83.3					30.1	21.3	52.1
LOS		D	C	F	F					C	C	D
Approach Delay (s/veh)		45.5			86.1						38.2	
Approach LOS		D			F						D	
90th %ile Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
90th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
70th %ile Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
70th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
50th %ile Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
50th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
30th %ile Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
30th %ile Term Code		Max	Max	Max	Hold					Coord	Coord	Coord
10th %ile Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
10th %ile Term Code		Max	Max	Max	Hold					Coord	Coord	Coord

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay (s/veh): 56.7		Intersection LOS: E	
Intersection Capacity Utilization 83.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 43: SH 288





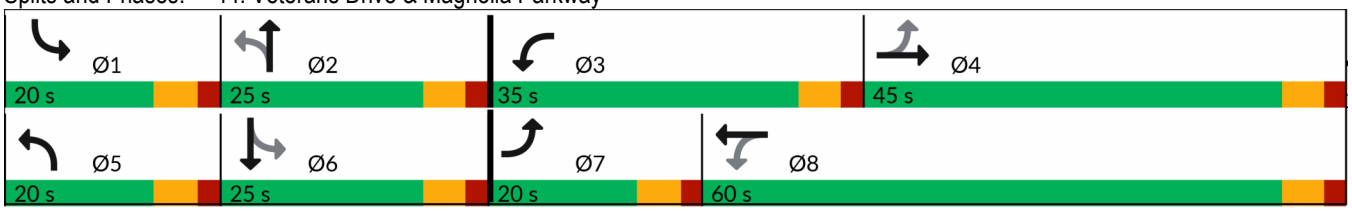
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	787	124	169	453	108	182	232	358	120	127	74
Future Volume (vph)	62	787	124	169	453	108	182	232	358	120	127	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	220		150	120		150	80		80
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.980			0.971			0.909			0.945	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3437	0	1770	3217	0	1770	3345	0
Flt Permitted	0.411			0.105			0.574			0.223		
Satd. Flow (perm)	766	3468	0	196	3437	0	1069	3217	0	415	3345	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			29			264			78	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3334			4203			1951			5273	
Travel Time (s)		75.8			95.5			44.3			119.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	67	855	135	184	492	117	198	252	389	130	138	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	990	0	184	609	0	198	641	0	130	218	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

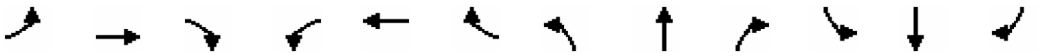
Lanes, Volumes, Timings
44: Veterans Drive & Magnoila Parkway 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	7.0		3.0	7.0		10.0	5.0		10.0	5.0	
Minimum Split (s)	20.0	45.0		35.0	40.0		20.0	25.0		20.0	25.0	
Total Split (s)	20.0	45.0		35.0	60.0		20.0	25.0		20.0	25.0	
Total Split (%)	16.0%	36.0%		28.0%	48.0%		16.0%	20.0%		16.0%	20.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	43.0	35.5		53.0	43.2		31.9	19.1		29.3	17.9	
Actuated g/C Ratio	0.42	0.35		0.52	0.42		0.31	0.19		0.29	0.17	
v/c Ratio	0.17	0.82		0.63	0.42		0.47	0.79		0.48	0.34	
Control Delay (s/veh)	13.7	37.2		27.3	21.6		30.0	32.1		31.5	26.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	13.7	37.2		27.3	21.6		30.0	32.1		31.5	26.8	
LOS	B	D		C	C		C	C		C	C	
Approach Delay (s/veh)		35.7			22.9			31.6			28.6	
Approach LOS		D			C			C			C	
90th %ile Green (s)	9.3	39.0		18.4	48.1		14.0	19.0		14.0	19.0	
90th %ile Term Code	Gap	Max		Gap	Hold		Max	MaxR		Max	Hold	
70th %ile Green (s)	8.2	39.0		14.7	45.5		14.0	19.0		12.7	17.7	
70th %ile Term Code	Gap	Max		Gap	Hold		Max	MaxR		Gap	Hold	
50th %ile Green (s)	7.4	38.5		12.1	43.2		14.0	19.0		10.9	15.9	
50th %ile Term Code	Gap	Gap		Gap	Hold		Max	MaxR		Gap	Hold	
30th %ile Green (s)	6.8	33.8		9.7	36.7		12.0	19.0		10.0	17.0	
30th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Min	Hold	
10th %ile Green (s)	0.0	27.9		8.0	41.9		10.0	19.0		10.0	19.0	
10th %ile Term Code	Skip	Gap		Gap	Hold		Min	MaxR		Min	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 102.7			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 30.4		Intersection LOS: C	
Intersection Capacity Utilization 79.7%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 114.4			
70th %ile Actuated Cycle: 109.4			
50th %ile Actuated Cycle: 104.5			
30th %ile Actuated Cycle: 96.5			
10th %ile Actuated Cycle: 88.9			

Splits and Phases: 44: Veterans Drive & Magnoila Parkway





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	95	1	148	3	150	342	1	6	138	22
Future Volume (vph)	33	0	95	1	148	3	150	342	1	6	138	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.850			0.997						0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3008	0	1770	3529	0	1770	3539	0	1770	3465	0
Flt Permitted							0.642			0.530		
Satd. Flow (perm)	1863	3008	0	1863	3529	0	1196	3539	0	987	3465	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		676			3			1			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1272			1116			5316			5367	
Travel Time (s)		28.9			25.4			120.8			122.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	0	103	1	161	3	163	372	1	7	150	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	103	0	1	164	0	163	373	0	7	174	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
45: Veterans Drive & Old Massey Ranch Road

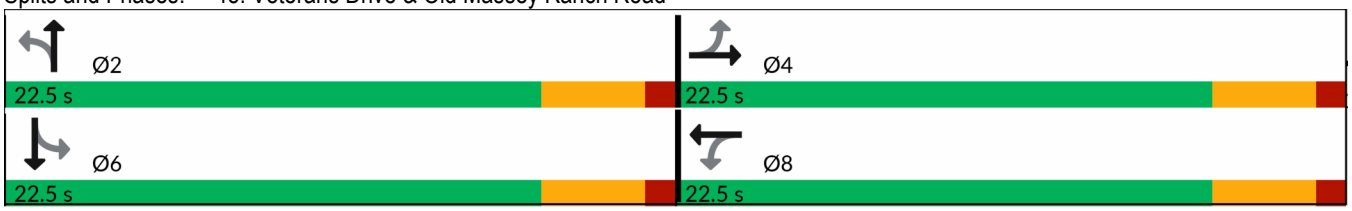
09/16/2024

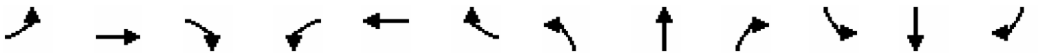
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)	6.7	6.7		6.8	6.8		17.2	17.2		17.2	17.2	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.66	0.66		0.66	0.66	
v/c Ratio	0.08	0.08		0.00	0.18		0.21	0.16		0.01	0.08	
Control Delay (s/veh)	9.1	0.1		9.0	8.7		5.7	4.3		4.7	3.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.1	0.1		9.0	8.7		5.7	4.3		4.7	3.9	
LOS	A	A		A	A		A	A		A	A	
Approach Delay (s/veh)		2.4			8.7			4.7			3.9	
Approach LOS		A			A			A			A	
90th %ile Green (s)	8.3	8.3		8.3	8.3		16.3	16.3		16.3	16.3	
90th %ile Term Code	Gap	Gap		Gap	Gap		Gap	Gap		Hold	Hold	
70th %ile Green (s)	7.2	7.2		7.2	7.2		11.8	11.8		11.8	11.8	
70th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Gap		Hold	Hold	
50th %ile Green (s)	6.5	6.5		6.5	6.5		9.4	9.4		9.4	9.4	
50th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Gap		Hold	Hold	
30th %ile Green (s)	0.0	0.0		0.0	0.0		14.7	14.7		14.7	14.7	
30th %ile Term Code	Skip	Skip		Skip	Skip		Dwell	Dwell		Dwell	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		20.8	20.8		20.8	20.8	
10th %ile Term Code	Skip	Skip		Skip	Skip		Dwell	Dwell		Dwell	Dwell	

Intersection Summary

Area Type: Other
Cycle Length: 45
Actuated Cycle Length: 26.2
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.21
Intersection Signal Delay (s/veh): 4.9 Intersection LOS: A
Intersection Capacity Utilization 37.0% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 33.6
70th %ile Actuated Cycle: 28
50th %ile Actuated Cycle: 24.9
30th %ile Actuated Cycle: 19.2
10th %ile Actuated Cycle: 25.3

Splits and Phases: 45: Veterans Drive & Old Massey Ranch Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	15	33	93	13	157	10	299	126	98	123	6
Future Volume (vph)	33	15	33	93	13	157	10	299	126	98	123	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.896			0.861			0.956			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3171	0	1770	3047	0	1770	3383	0	1770	3514	0
Flt Permitted	0.635			0.721			0.663			0.486		
Satd. Flow (perm)	1183	3171	0	1343	3047	0	1235	3383	0	905	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			171			137			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1459			1916			1299			5316	
Travel Time (s)		33.2			43.5			29.5			120.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	16	36	101	14	171	11	325	137	107	134	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	52	0	101	185	0	11	462	0	107	141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
46: Veterans Drive & Hastings Canon Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)	7.7	7.7		7.7	7.7		13.3	13.3		13.3	13.3	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.49	0.49		0.49	0.49	
v/c Ratio	0.11	0.06		0.26	0.19		0.02	0.27		0.24	0.08	
Control Delay (s/veh)	8.2	4.4		9.6	2.7		6.1	4.8		8.4	5.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	8.2	4.4		9.6	2.7		6.1	4.8		8.4	5.9	
LOS	A	A		A	A		A	A		A	A	
Approach Delay (s/veh)		6.0			5.1			4.8			7.0	
Approach LOS		A			A			A			A	
90th %ile Green (s)	11.8	11.8		11.8	11.8		14.3	14.3		14.3	14.3	
90th %ile Term Code	Hold	Hold		Gap	Gap		Hold	Hold		Gap	Gap	
70th %ile Green (s)	8.3	8.3		8.3	8.3		9.7	9.7		9.7	9.7	
70th %ile Term Code	Hold	Hold		Gap	Gap		Hold	Hold		Gap	Gap	
50th %ile Green (s)	7.2	7.2		7.2	7.2		8.6	8.6		8.6	8.6	
50th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Gap		Hold	Hold	
30th %ile Green (s)	6.3	6.3		6.3	6.3		7.9	7.9		7.9	7.9	
30th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell		Dwell	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		20.6	20.6		20.6	20.6	
10th %ile Term Code	Skip	Skip		Skip	Skip		Dwell	Dwell		Dwell	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 27			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.27			
Intersection Signal Delay (s/veh): 5.5		Intersection LOS: A	
Intersection Capacity Utilization 42.3%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 35.1			
70th %ile Actuated Cycle: 27			
50th %ile Actuated Cycle: 24.8			
30th %ile Actuated Cycle: 23.2			
10th %ile Actuated Cycle: 25.1			

Splits and Phases: 46: Veterans Drive & Hastings Canon Road



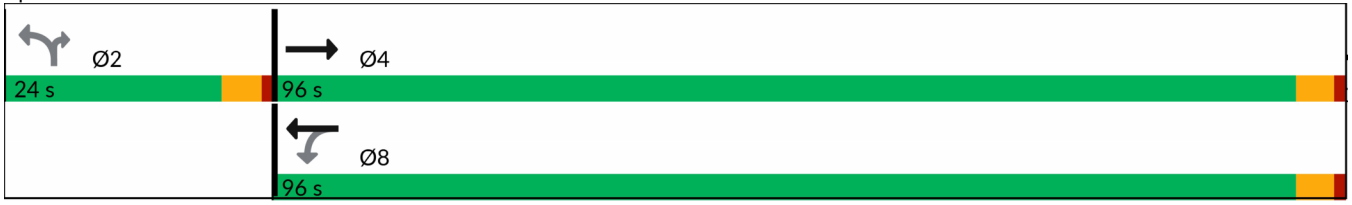
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	377	58	161	181	187	394
Future Volume (vph)	377	58	161	181	187	394
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		120	150		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.980					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3468	0	1770	3539	1770	1583
Flt Permitted			0.481		0.950	
Satd. Flow (perm)	3468	0	896	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	43					428
Link Speed (mph)	30			30	30	
Link Distance (ft)	601			563	5273	
Travel Time (s)	13.7			12.8	119.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	410	63	175	197	203	428
Shared Lane Traffic (%)						
Lane Group Flow (vph)	473	0	175	197	203	428
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases			8		2	2
Detector Phase	4		8	8	2	2
Switch Phase						

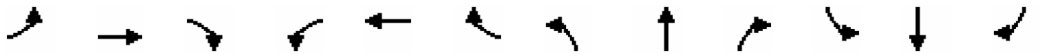
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	96.0		96.0	96.0	24.0	24.0
Total Split (%)	80.0%		80.0%	80.0%	20.0%	20.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		None	None	Min	Min
Act Effct Green (s)	12.9		12.9	12.9	9.5	9.5
Actuated g/C Ratio	0.41		0.41	0.41	0.30	0.30
v/c Ratio	0.33		0.48	0.14	0.38	0.55
Control Delay (s/veh)	6.5		12.3	6.2	12.3	4.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.5		12.3	6.2	12.3	4.7
LOS	A		B	A	B	A
Approach Delay (s/veh)	6.5			9.1	7.2	
Approach LOS	A			A	A	
90th %ile Green (s)	19.7		19.7	19.7	12.9	12.9
90th %ile Term Code	Hold		Gap	Gap	Gap	Gap
70th %ile Green (s)	15.1		15.1	15.1	11.0	11.0
70th %ile Term Code	Hold		Gap	Gap	Gap	Gap
50th %ile Green (s)	12.9		12.9	12.9	8.9	8.9
50th %ile Term Code	Hold		Gap	Gap	Gap	Gap
30th %ile Green (s)	10.4		10.4	10.4	8.0	8.0
30th %ile Term Code	Hold		Gap	Gap	Gap	Gap
10th %ile Green (s)	7.8		7.8	7.8	7.0	7.0
10th %ile Term Code	Hold		Gap	Gap	Gap	Gap

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 31.7
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay (s/veh): 7.4 Intersection LOS: A
Intersection Capacity Utilization 44.2% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 41.6
70th %ile Actuated Cycle: 35.1
50th %ile Actuated Cycle: 30.8
30th %ile Actuated Cycle: 27.4
10th %ile Actuated Cycle: 23.8

Splits and Phases: 47: Veterans Drive & Walnut Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	0	46	0	0	1	86	996	0	9	721	176
Future Volume (vph)	19	0	46	0	0	1	86	996	0	9	721	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	60		0	120		150	120		150	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.850			0.850						0.971	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1770	3008	0	1863	3008	0	1770	3539	0	1770	3437	0
Flt Permitted	0.625						0.220			0.230		
Satd. Flow (perm)	1164	3008	0	1863	3008	0	410	3539	0	428	3437	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		420			387						50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1082			1201			1142			806	
Travel Time (s)		24.6			27.3			26.0			18.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	21	0	50	0	0	1	93	1083	0	10	784	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	50	0	0	1	0	93	1083	0	10	975	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		17			17			32			32	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
48: Kirby Drive & North Spectrum Boulevard

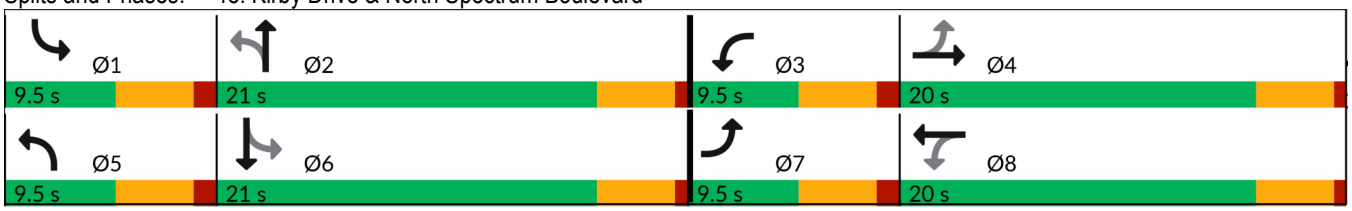
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		9.5	20.0		9.5	21.0		9.5	21.0	
Total Split (%)	15.8%	33.3%		15.8%	33.3%		15.8%	35.0%		15.8%	35.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	6.6	7.1			5.6		28.8	31.2		26.8	26.1	
Actuated g/C Ratio	0.17	0.18			0.14		0.74	0.80		0.69	0.67	
v/c Ratio	0.08	0.06			0.00		0.19	0.38		0.02	0.42	
Control Delay (s/veh)	14.2	0.1			0.0		4.5	7.4		4.3	8.6	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	14.2	0.1			0.0		4.5	7.4		4.3	8.6	
LOS	B	A			A		A	A		A	A	
Approach Delay (s/veh)		4.3						7.2			8.6	
Approach LOS		A						A			A	
90th %ile Green (s)	5.0	15.0		0.0	5.5		5.0	17.0		5.0	17.0	
90th %ile Term Code	Max	Hold		Skip	Gap		Max	MaxR		Max	Max	
70th %ile Green (s)	0.0	5.5		0.0	5.5		5.0	26.5		0.0	17.0	
70th %ile Term Code	Skip	Gap		Skip	Hold		Max	Hold		Skip	Max	
50th %ile Green (s)	0.0	0.0		0.0	0.0		5.0	28.8		0.0	19.3	
50th %ile Term Code	Skip	Skip		Skip	Skip		Max	Dwell		Skip	Dwell	
30th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	32.0		0.0	32.0	
30th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Dwell		Skip	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	32.0		0.0	32.0	
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Dwell		Skip	Dwell	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 38.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay (s/veh): 7.7 Intersection LOS: A
Intersection Capacity Utilization 49.8% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 49.5
70th %ile Actuated Cycle: 40
50th %ile Actuated Cycle: 32.8
30th %ile Actuated Cycle: 36
10th %ile Actuated Cycle: 36

Splits and Phases: 48: Kirby Drive & North Spectrum Boulevard





Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	56	21	25	1060	21	13	743
Future Volume (vph)	56	21	25	1060	21	13	743
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%
Storage Length (ft)	150	150	150		150	120	
Storage Lanes	0	0	1		0	1	
Taper Length (ft)	25		25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor							
Frt		0.850		0.997			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	1583	1770	3529	0	1770	3539
Flt Permitted	0.950		0.950			0.191	
Satd. Flow (perm)	1770	1583	1770	3529	0	356	3539
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		23		4			
Link Speed (mph)	30			30			30
Link Distance (ft)	1050			764			1142
Travel Time (s)	23.9			17.4			26.0
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0
Parking (#/hr)							
Mid-Block Traffic (%)	0%			0%			0%
Adj. Flow (vph)	61	23	27	1152	23	14	808
Shared Lane Traffic (%)							
Lane Group Flow (vph)	61	23	27	1175	0	14	808
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	R NA	Left	Right	Left	Left
Median Width(ft)	12			12			12
Link Offset(ft)	0			0			0
Crosswalk Width(ft)	16			16			16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9		9	15	
Number of Detectors	1	1	1	2		1	2
Detector Template	Left	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0		0	0
Turn Type	Prot	Perm	Prot	NA		pm+pt	NA
Protected Phases	8		5	2		1	6
Permitted Phases		8				6	
Detector Phase	8	8	5	2		1	6
Switch Phase							

Lanes, Volumes, Timings
49: Kirby Drive & South Spectrum Boulevard

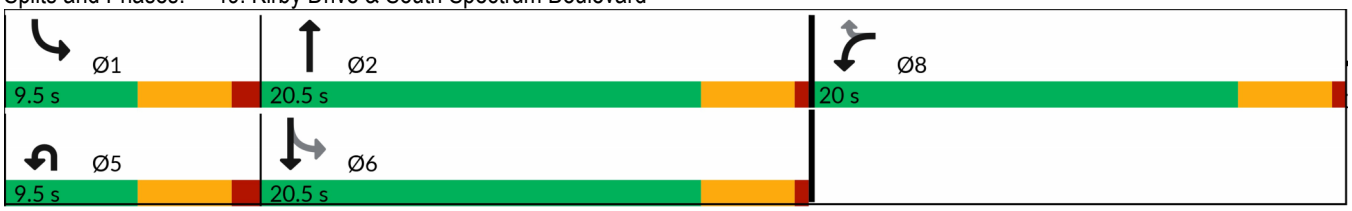
09/16/2024

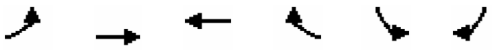
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	4.0	4.0	5.0	4.0		5.0	4.0
Minimum Split (s)	20.0	20.0	9.5	20.0		9.5	20.0
Total Split (s)	20.0	20.0	9.5	20.5		9.5	20.5
Total Split (%)	40.0%	40.0%	19.0%	41.0%		19.0%	41.0%
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	1.0	0.5		1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.0		4.5	4.0
Lead/Lag			Lead	Lag		Lead	Lag
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Recall Mode	None	None	None	Max		None	None
Act Effct Green (s)	6.8	6.8	5.0	27.6		26.3	27.6
Actuated g/C Ratio	0.18	0.18	0.13	0.72		0.69	0.72
v/c Ratio	0.19	0.08	0.12	0.46		0.03	0.32
Control Delay (s/veh)	15.2	7.6	17.0	7.8		3.8	5.4
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	15.2	7.6	17.0	7.8		3.8	5.4
LOS	B	A	B	A		A	A
Approach Delay (s/veh)	13.1			8.0			5.4
Approach LOS	B			A			A
90th %ile Green (s)	8.7	8.7	5.0	16.5		5.0	16.5
90th %ile Term Code	Gap	Gap	Max	MaxR		Max	Max
70th %ile Green (s)	7.2	7.2	0.0	19.7		0.0	19.7
70th %ile Term Code	Gap	Gap	Skip	Dwell		Skip	Dwell
50th %ile Green (s)	6.8	6.8	0.0	28.1		0.0	28.1
50th %ile Term Code	Gap	Gap	Skip	Dwell		Skip	Dwell
30th %ile Green (s)	0.0	0.0	0.0	31.5		0.0	31.5
30th %ile Term Code	Skip	Skip	Skip	Dwell		Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	31.5		0.0	31.5
10th %ile Term Code	Skip	Skip	Skip	Dwell		Skip	Dwell

Intersection Summary

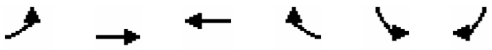
Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 38.3
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay (s/veh): 7.2 Intersection LOS: A
Intersection Capacity Utilization 40.0% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 42.7
70th %ile Actuated Cycle: 34.9
50th %ile Actuated Cycle: 42.9
30th %ile Actuated Cycle: 35.5
10th %ile Actuated Cycle: 35.5

Splits and Phases: 49: Kirby Drive & South Spectrum Boulevard





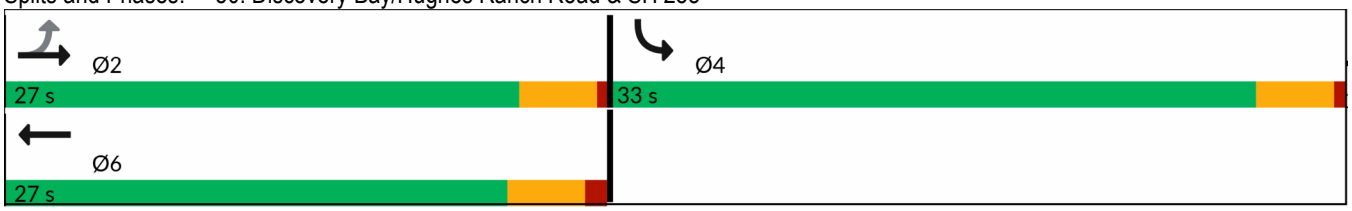
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	511	24	19	298	52	28
Future Volume (vph)	511	24	19	298	52	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	150	150
Storage Lanes	0			0	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.873		0.953	
Flt Protected		0.954			0.968	
Satd. Flow (prot)	0	1777	1626	0	1718	0
Flt Permitted		0.519			0.968	
Satd. Flow (perm)	0	967	1626	0	1718	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			324		30	
Link Speed (mph)		30	30		30	
Link Distance (ft)		769	312		2088	
Travel Time (s)		17.5	7.1		47.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	555	26	21	324	57	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	581	345	0	87	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Turn Type	Perm	NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases	2					
Detector Phase	2	2	6		4	
Switch Phase						

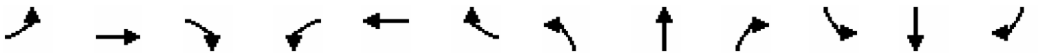


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	4.0	4.0	5.0		4.0	
Minimum Split (s)	20.0	20.0	22.5		20.0	
Total Split (s)	27.0	27.0	27.0		33.0	
Total Split (%)	45.0%	45.0%	45.0%		55.0%	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	1.0		0.5	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.0	4.5		4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max		None	
Act Effct Green (s)		36.0	35.8		7.1	
Actuated g/C Ratio		0.79	0.79		0.16	
v/c Ratio		0.76	0.26		0.30	
Control Delay (s/veh)		18.3	1.3		14.7	
Queue Delay		0.0	0.0		0.0	
Total Delay (s/veh)		18.3	1.3		14.7	
LOS		B	A		B	
Approach Delay (s/veh)		18.3	1.3		14.7	
Approach LOS		B	A		B	
90th %ile Green (s)	25.3	25.3	24.8		8.9	
90th %ile Term Code	Dwell	Dwell	Dwell		Gap	
70th %ile Green (s)	31.3	31.3	30.8		7.9	
70th %ile Term Code	Dwell	Dwell	Dwell		Gap	
50th %ile Green (s)	38.0	38.0	37.5		7.1	
50th %ile Term Code	Dwell	Dwell	Dwell		Gap	
30th %ile Green (s)	38.0	38.0	37.5		0.0	
30th %ile Term Code	Dwell	Dwell	Dwell		Skip	
10th %ile Green (s)	38.0	38.0	37.5		0.0	
10th %ile Term Code	Dwell	Dwell	Dwell		Skip	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 45.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 12.2		Intersection LOS: B	
Intersection Capacity Utilization 64.0%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 42.2			
70th %ile Actuated Cycle: 47.2			
50th %ile Actuated Cycle: 53.1			
30th %ile Actuated Cycle: 42			
10th %ile Actuated Cycle: 42			

Splits and Phases: 50: Discovery Bay/Hughes Ranch Road & SH 288





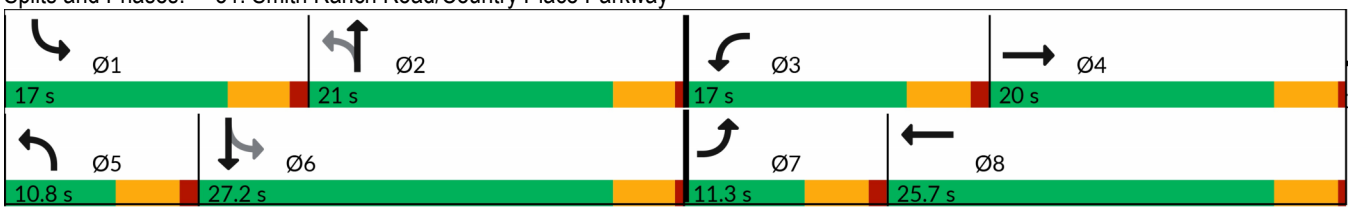
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	110	4	127	518	64	56	74	43	184	197	84
Future Volume (vph)	18	110	4	127	518	64	56	74	43	184	197	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	220		150	150		40	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.995			0.983			0.944			0.955	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3522	0	1770	3479	0	1770	3341	0	1770	3380	0
Flt Permitted	0.950			0.950			0.566			0.546		
Satd. Flow (perm)	1770	3522	0	1770	3479	0	1054	3341	0	1017	3380	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			18			47			90	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		215			3362			510			402	
Travel Time (s)		4.9			76.4			11.6			9.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	20	120	4	138	563	70	61	80	47	200	214	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	124	0	138	633	0	61	127	0	200	305	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
51: Smith Ranch Road/Country Place Parkway 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	11.3	20.0		17.0	25.7		10.8	21.0		17.0	27.2	
Total Split (%)	15.1%	26.7%		22.7%	34.3%		14.4%	28.0%		22.7%	36.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	6.2	9.9		9.7	19.5		23.1	17.4		30.7	25.5	
Actuated g/C Ratio	0.10	0.16		0.16	0.32		0.38	0.29		0.50	0.42	
v/c Ratio	0.11	0.22		0.49	0.56		0.13	0.13		0.32	0.21	
Control Delay (s/veh)	30.4	25.0		31.8	19.5		11.3	14.1		11.8	11.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	30.4	25.0		31.8	19.5		11.3	14.1		11.8	11.3	
LOS	C	C		C	B		B	B		B	B	
Approach Delay (s/veh)		25.7			21.7			13.2			11.5	
Approach LOS		C			C			B			B	
90th %ile Green (s)	6.8	16.0		12.5	21.7		6.3	17.0		12.5	23.2	
90th %ile Term Code	Max	Hold		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	0.0	8.4		12.0	24.9		6.3	17.0		11.1	21.8	
70th %ile Term Code	Skip	Gap		Gap	Hold		Max	MaxR		Gap	Hold	
50th %ile Green (s)	0.0	7.5		10.1	22.1		6.3	17.0		9.5	20.2	
50th %ile Term Code	Skip	Gap		Gap	Hold		Max	MaxR		Gap	Hold	
30th %ile Green (s)	0.0	6.7		8.4	19.6		0.0	17.0		8.1	29.6	
30th %ile Term Code	Skip	Gap		Gap	Hold		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	10.5		0.0	10.5		0.0	17.0		6.4	27.9	
10th %ile Term Code	Skip	Hold		Skip	Gap		Skip	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 61			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 17.8		Intersection LOS: B	
Intersection Capacity Utilization 40.0%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 75			
70th %ile Actuated Cycle: 65.5			
50th %ile Actuated Cycle: 61.1			
30th %ile Actuated Cycle: 57.2			
10th %ile Actuated Cycle: 46.4			

Splits and Phases: 51: Smith Ranch Road/Country Place Parkway



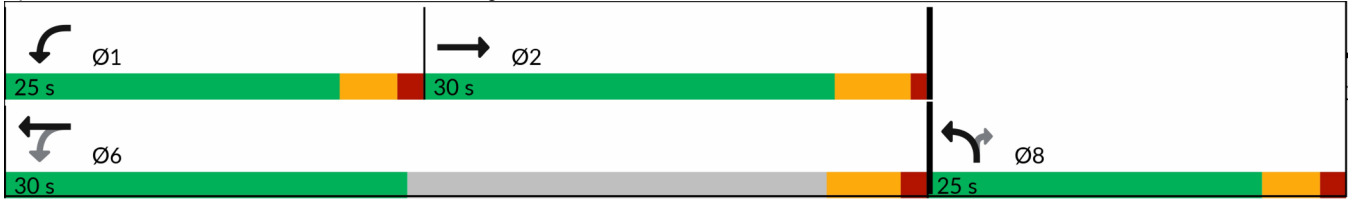


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	383	133	187	431	222	333
Future Volume (vph)	383	133	187	431	222	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	120		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.961					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3401	0	1770	3539	1770	1583
Flt Permitted			0.255		0.950	
Satd. Flow (perm)	3401	0	475	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	63					362
Link Speed (mph)	30			30	30	
Link Distance (ft)	3362			2489	974	
Travel Time (s)	76.4			56.6	22.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	416	145	203	468	241	362
Shared Lane Traffic (%)						
Lane Group Flow (vph)	561	0	203	468	241	362
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	11.0		4.0	11.0	5.0	5.0
Minimum Split (s)	25.0		20.0	25.0	21.0	21.0
Total Split (s)	30.0		25.0	30.0	25.0	25.0
Total Split (%)	37.5%		31.3%	37.5%	31.3%	31.3%
Yellow Time (s)	4.5		3.5	4.5	3.5	3.5
All-Red Time (s)	1.0		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	Max	Max
Act Effct Green (s)	15.3		30.2	29.2	20.2	20.2
Actuated g/C Ratio	0.25		0.50	0.48	0.33	0.33
v/c Ratio	0.62		0.46	0.27	0.41	0.47
Control Delay (s/veh)	20.9		11.9	9.5	19.6	4.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.9		11.9	9.5	19.6	4.7
LOS	C		B	A	B	A
Approach Delay (s/veh)	20.9			10.2	10.7	
Approach LOS	C			B	B	
90th %ile Green (s)	20.8		12.2	37.5	20.0	20.0
90th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
70th %ile Green (s)	17.7		10.5	32.7	20.0	20.0
70th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
50th %ile Green (s)	14.7		9.3	28.5	20.0	20.0
50th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
30th %ile Green (s)	13.0		8.3	25.8	20.0	20.0
30th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
10th %ile Green (s)	11.0		6.9	22.4	20.0	20.0
10th %ile Term Code	Min		Gap	Hold	MaxR	MaxR

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 60.4			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 13.6		Intersection LOS: B	
Intersection Capacity Utilization 50.4%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 68.5			
70th %ile Actuated Cycle: 63.7			
50th %ile Actuated Cycle: 59.5			
30th %ile Actuated Cycle: 56.8			
10th %ile Actuated Cycle: 53.4			

Splits and Phases: 52: Miller Ranch Road & Hughes Ranch Road

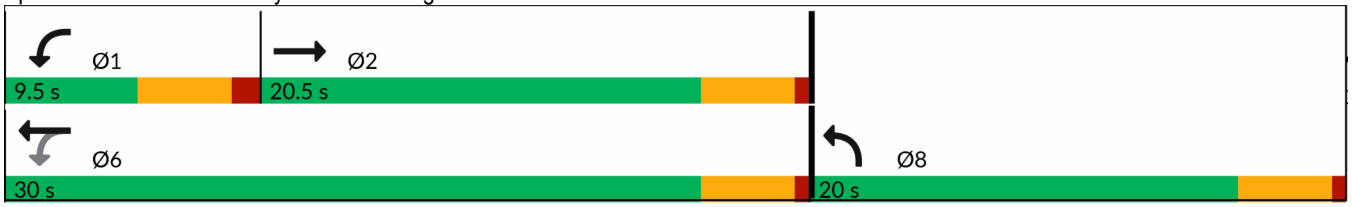


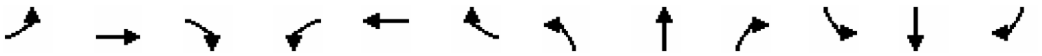
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	536	266	141	444	224	138
Future Volume (vph)	536	266	141	444	224	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	80		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.950				0.948	
Flt Protected			0.950		0.970	
Satd. Flow (prot)	3362	0	1770	3539	1713	0
Flt Permitted			0.180		0.970	
Satd. Flow (perm)	3362	0	335	3539	1713	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	183				65	
Link Speed (mph)	30			30	30	
Link Distance (ft)	2489			1502	641	
Travel Time (s)	56.6			34.1	14.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	583	289	153	483	243	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	872	0	153	483	393	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	4.0		5.0	4.0	4.0	
Minimum Split (s)	20.0		9.5	20.0	20.0	
Total Split (s)	20.5		9.5	30.0	20.0	
Total Split (%)	41.0%		19.0%	60.0%	40.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.5	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max		None	None	None	
Act Effct Green (s)	17.7		24.4	24.9	13.1	
Actuated g/C Ratio	0.38		0.53	0.54	0.28	
v/c Ratio	0.62		0.46	0.25	0.74	
Control Delay (s/veh)	12.7		10.9	6.5	22.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	12.7		10.9	6.5	22.2	
LOS	B		B	A	C	
Approach Delay (s/veh)	12.7			7.6	22.2	
Approach LOS	B			A	C	
90th %ile Green (s)	16.5		5.0	26.0	16.0	
90th %ile Term Code	MaxR		Max	Hold	Max	
70th %ile Green (s)	16.5		5.0	26.0	16.0	
70th %ile Term Code	MaxR		Max	Hold	Max	
50th %ile Green (s)	16.5		5.0	26.0	14.7	
50th %ile Term Code	MaxR		Max	Hold	Gap	
30th %ile Green (s)	16.5		5.0	26.0	11.8	
30th %ile Term Code	MaxR		Max	Hold	Gap	
10th %ile Green (s)	20.1		0.0	20.1	7.8	
10th %ile Term Code	Dwell		Skip	Dwell	Gap	

Intersection Summary	
Area Type:	Other
Cycle Length: 50	
Actuated Cycle Length: 46.1	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay (s/veh): 13.0	Intersection LOS: B
Intersection Capacity Utilization 62.4%	ICU Level of Service B
Analysis Period (min) 15	
90th %ile Actuated Cycle: 50	
70th %ile Actuated Cycle: 50	
50th %ile Actuated Cycle: 48.7	
30th %ile Actuated Cycle: 45.8	
10th %ile Actuated Cycle: 35.9	

Splits and Phases: 53: Bryan Court & Hughes Ranch Road





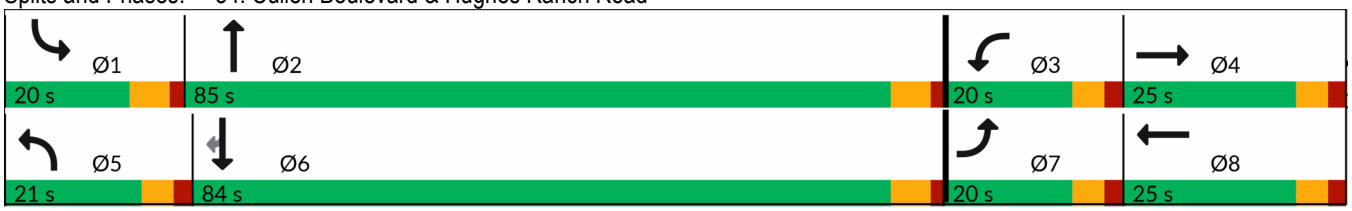
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	75	188	28	135	123	219	1184	19	84	870	101
Future Volume (vph)	179	75	188	28	135	123	219	1184	19	84	870	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		150	80		150	330		150	330		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.893			0.928			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3161	0	1770	3284	0	1770	3532	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3161	0	1770	3284	0	1770	3532	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		204			127			2				102
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3319			5457			763			632	
Travel Time (s)		75.4			124.0			17.3			14.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	195	82	204	30	147	134	238	1287	21	91	946	110
Shared Lane Traffic (%)												
Lane Group Flow (vph)	195	286	0	30	281	0	238	1308	0	91	946	110
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												

Lanes, Volumes, Timings
54: Cullen Boulevard & Hughes Ranch Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	7.0
Minimum Split (s)	20.0	25.0		20.0	25.0		20.0	45.0		20.0	45.0	45.0
Total Split (s)	20.0	25.0		20.0	25.0		21.0	85.0		20.0	84.0	84.0
Total Split (%)	13.3%	16.7%		13.3%	16.7%		14.0%	56.7%		13.3%	56.0%	56.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	4.5		4.5	4.5	4.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max		None	None	None
Act Effct Green (s)	14.5	23.7		7.9	12.2		15.5	80.1		11.7	76.8	76.8
Actuated g/C Ratio	0.10	0.17		0.06	0.09		0.11	0.57		0.08	0.54	0.54
v/c Ratio	1.08	0.41		0.31	0.70		1.23	0.65		0.62	0.94	0.12
Control Delay (s/veh)	147.2	18.8		73.3	44.1		190.5	23.9		82.1	47.7	3.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	147.2	18.8		73.3	44.1		190.5	23.9		82.1	47.7	3.9
LOS	F	B		E	D		F	C		F	D	A
Approach Delay (s/veh)		70.9			46.9			49.5			46.2	
Approach LOS		E			D			D			D	
90th %ile Green (s)	14.5	21.1		10.7	17.3		15.5	79.0		14.0	78.0	78.0
90th %ile Term Code	Max	Hold		Gap	Gap		Max	MaxR		Max	Max	Max
70th %ile Green (s)	14.5	19.8		9.0	14.3		15.5	79.0		14.0	78.0	78.0
70th %ile Term Code	Max	Hold		Gap	Gap		Max	MaxR		Max	Max	Max
50th %ile Green (s)	14.5	19.0		7.8	12.3		15.5	80.4		12.6	78.0	78.0
50th %ile Term Code	Max	Hold		Gap	Gap		Max	Hold		Gap	Max	Max
30th %ile Green (s)	14.5	30.3		0.0	10.3		15.5	82.4		10.6	78.0	78.0
30th %ile Term Code	Max	Hold		Skip	Gap		Max	Hold		Gap	Max	Max
10th %ile Green (s)	14.5	27.5		0.0	7.5		15.5	79.0		7.7	71.7	71.7
10th %ile Term Code	Max	Hold		Skip	Gap		Max	MaxR		Gap	Hold	Hold

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 141.6			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.23			
Intersection Signal Delay (s/veh): 51.1		Intersection LOS: D	
Intersection Capacity Utilization 94.3%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 147.8			
70th %ile Actuated Cycle: 144.8			
50th %ile Actuated Cycle: 142.8			
30th %ile Actuated Cycle: 140.8			
10th %ile Actuated Cycle: 131.7			

Splits and Phases: 54: Cullen Boulevard & Hughes Ranch Road





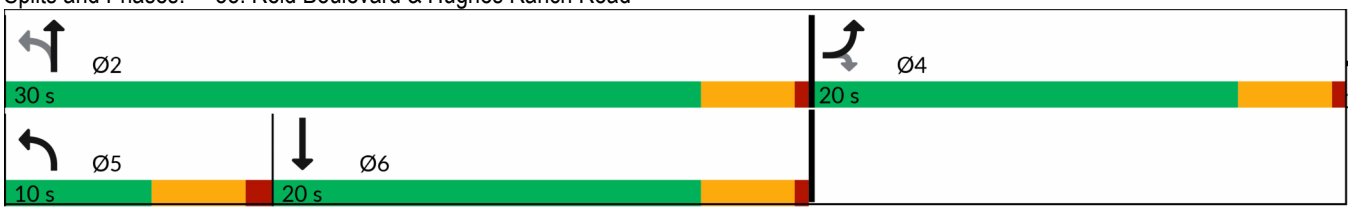
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	151	191	221	141	19
Future Volume (vph)	13	151	191	221	141	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	500	150	150			150
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor						
Frt		0.850			0.982	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3476	0
Flt Permitted	0.950		0.527			
Satd. Flow (perm)	1770	1583	982	3539	3476	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		164			21	
Link Speed (mph)	30			30	30	
Link Distance (ft)	5457			901	567	
Travel Time (s)	124.0			20.5	12.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	14	164	208	240	153	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	164	208	240	174	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Detector Phase	4	4	5	2	6	
Switch Phase						

Lanes, Volumes, Timings
55: Reid Boulevard & Hughes Ranch Road 09/16/2024

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Initial (s)	4.0	4.0	5.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	9.5	20.0	20.0	
Total Split (s)	20.0	20.0	10.0	30.0	20.0	
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	1.0	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	Max	None	
Act Effct Green (s)	6.6	6.6	28.3	29.6	21.4	
Actuated g/C Ratio	0.16	0.16	0.68	0.71	0.51	
v/c Ratio	0.05	0.42	0.27	0.10	0.10	
Control Delay (s/veh)	14.4	7.2	4.4	3.1	7.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	14.4	7.2	4.4	3.1	7.5	
LOS	B	A	A	A	A	
Approach Delay (s/veh)	7.8			3.7	7.5	
Approach LOS	A			A	A	
90th %ile Green (s)	9.4	9.4	5.5	26.0	16.0	
90th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
70th %ile Green (s)	7.0	7.0	5.5	26.0	16.0	
70th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
50th %ile Green (s)	5.7	5.7	5.5	26.0	16.0	
50th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
30th %ile Green (s)	5.5	5.5	5.5	26.0	16.0	
30th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
10th %ile Green (s)	0.0	0.0	0.0	41.0	41.0	
10th %ile Term Code	Skip	Skip	Skip	Dwell	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 41.7			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay (s/veh): 5.4		Intersection LOS: A	
Intersection Capacity Utilization 28.4%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 43.4			
70th %ile Actuated Cycle: 41			
50th %ile Actuated Cycle: 39.7			
30th %ile Actuated Cycle: 39.5			
10th %ile Actuated Cycle: 45			

Splits and Phases: 55: Reid Boulevard & Hughes Ranch Road





Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1569	97		395	
Travel Time (s)		35.7	2.2		9.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	0	0	-	0	1	0
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	-	0	1022	-
Stage 1	-	-	-	0	-	-
Stage 2	-	-	-	0	1022	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	-	-	-	1022	-
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	1022	-

Approach	SE	NW	SW
HCM Control Delay, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NWT	SEL	SETSWLn1	
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	-	0	-	0
HCM Lane LOS	-	A	-	A
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	7	0	0	1837	21
Future Volume (vph)	0	7	0	0	1837	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Ped Bike Factor						
Frt		0.865				0.850
Flt Protected						
Satd. Flow (prot)	0	1611	0	0	3539	1583
Flt Permitted						
Satd. Flow (perm)	0	1611	0	0	3539	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	216			500	772	
Travel Time (s)	4.9			11.4	17.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	8	0	0	1997	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	8	0	0	1997	23
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	0	0	1837	21
Future Vol, veh/h	0	7	0	0	1837	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	-	-	-	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	1997	23

Major/Minor	Minor2			Major2	
Conflicting Flow All	-	998		-	0
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	6.94		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	3.32		-	-
Pot Cap-1 Maneuver	0	242		-	0
Stage 1	0	-		-	0
Stage 2	0	-		-	0
Platoon blocked, %				-	
Mov Cap-1 Maneuver	-	242		-	-
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	SB
HCM Control Delay, s/v	20.35	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT
Capacity (veh/h)	242	-
HCM Lane V/C Ratio	0.031	-
HCM Control Delay (s/veh)	20.4	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	148	74	74	148	74	37	74	37	37	74	37
Future Volume (vph)	74	148	74	74	148	74	37	74	37	37	74	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.950			0.950			0.950			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3362	0	1770	3362	0	1770	1770	0	1770	1770	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3362	0	1770	3362	0	1770	1770	0	1770	1770	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3590			2239			733			785	
Travel Time (s)		81.6			50.9			16.7			17.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	80	161	80	80	161	80	40	80	40	40	80	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	241	0	80	241	0	40	120	0	40	120	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.3%		ICU Level of Service A	
Analysis Period (min) 15			

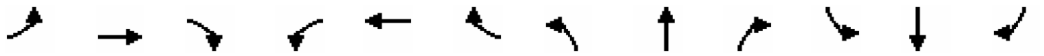
Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	148	74	74	148	74	37	74	37	37	74	37
Future Vol, veh/h	74	148	74	74	148	74	37	74	37	37	74	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	161	80	80	161	80	40	80	40	40	80	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	241	0	0	241	0	0	643	764	121	643	764	121
Stage 1	-	-	-	-	-	-	362	362	-	362	362	-
Stage 2	-	-	-	-	-	-	282	402	-	282	402	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1322	-	-	1322	-	-	358	332	908	358	332	908
Stage 1	-	-	-	-	-	-	629	624	-	629	624	-
Stage 2	-	-	-	-	-	-	702	599	-	702	599	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1322	-	-	1322	-	-	226	293	908	226	293	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	226	293	-	226	293	-
Stage 1	-	-	-	-	-	-	591	586	-	591	586	-
Stage 2	-	-	-	-	-	-	543	562	-	543	562	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.97	1.97	20.25	20.25
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	226	378	1322	-	-	1322	-	-	226	378
HCM Lane V/C Ratio	0.178	0.319	0.061	-	-	0.061	-	-	0.178	0.319
HCM Control Delay (s/veh)	24.3	18.9	7.9	-	-	7.9	-	-	24.3	18.9
HCM Lane LOS	C	C	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.6	1.3	0.2	-	-	0.2	-	-	0.6	1.3



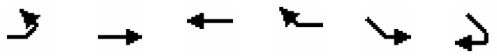
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	3539	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	3539	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2249			1937			317			367	
Travel Time (s)		51.1			44.0			7.2			8.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



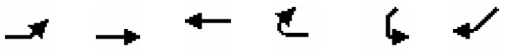
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	150		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1502			3319	640	
Travel Time (s)	34.1			75.4	14.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



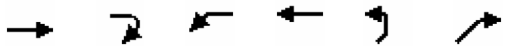
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			2	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	0	3278	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	0	3278	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1127	334		1418	
Travel Time (s)		25.6	7.6		32.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



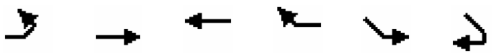
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	15	0	0	0	9
Future Volume (vph)	0	15	0	0	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	0	2
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.88
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	3539	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	0	3539	0	0	0	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	683		720	
Travel Time (s)		5.3	15.5		16.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	16	0	0	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	16	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		20	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		0	0		0	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	312			213	239	
Travel Time (s)	7.1			4.8	5.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	1863	1863	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	1863	1863	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		213	215		156	
Travel Time (s)		4.8	4.9		3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

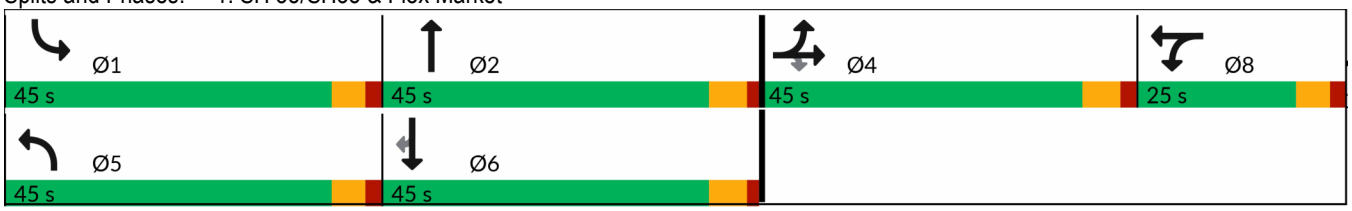
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	3	0	0	0	3	3	2297	6	12	1547	3
Future Volume (vph)	1	3	0	0	0	3	3	2297	6	12	1547	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	120		150
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor												
Frt					0.865							0.850
Flt Protected		0.988					0.950			0.950		
Satd. Flow (prot)	0	1840	1863	0	1611	0	1770	5085	0	1770	5085	1583
Flt Permitted		0.988					0.950			0.950		
Satd. Flow (perm)	0	1840	1863	0	1611	0	1770	5085	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					724							106
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		769			683			1825			845	
Travel Time (s)		17.5			15.5			41.5			19.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	3	0	0	0	3	3	2497	7	13	1682	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	3	0	3	2504	0	13	1682	3
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turn Type	Split	NA	Perm		NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												

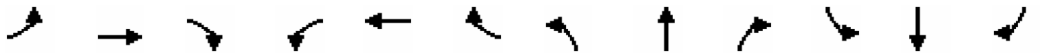
Lanes, Volumes, Timings
1: SH 35/SH35 & Flex Market 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	25.0	25.0	25.0	22.0	22.0		25.0	45.0		25.0	45.0	45.0
Total Split (s)	45.0	45.0	45.0	25.0	25.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	28.1%	28.1%	28.1%	15.6%	15.6%		28.1%	28.1%		28.1%	28.1%	28.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	Max		None	None	None
Act Effct Green (s)		5.8			5.6		5.7	58.4		6.1	58.5	58.5
Actuated g/C Ratio		0.09			0.09		0.09	0.90		0.09	0.90	0.90
v/c Ratio		0.02			0.00		0.02	0.55		0.08	0.37	0.00
Control Delay (s/veh)		31.8			0.0		31.7	6.9		31.5	4.5	0.0
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)		31.8			0.0		31.7	6.9		31.5	4.5	0.0
LOS		C			A		C	A		C	A	A
Approach Delay (s/veh)		31.8						6.9			4.7	
Approach LOS		C						A			A	
90th %ile Green (s)	6.2	6.2	6.2	5.5	5.5		6.1	41.6		7.1	42.6	42.6
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Gap	Dwell		Gap	Dwell	Dwell
70th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
70th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell
50th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
50th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 65			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 6.0		Intersection LOS: A	
Intersection Capacity Utilization 58.3%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 84.9			
70th %ile Actuated Cycle: 60			
50th %ile Actuated Cycle: 60			
30th %ile Actuated Cycle: 60			
10th %ile Actuated Cycle: 60			

Splits and Phases: 1: SH 35/SH35 & Flex Market





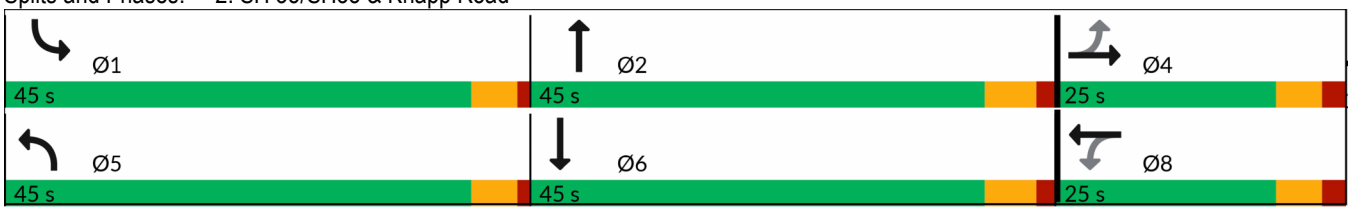
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	3	22	0	187	15	2097	21	43	1471	31
Future Volume (vph)	10	0	3	22	0	187	15	2097	21	43	1471	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	500		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.971			0.879			0.999			0.997	
Flt Protected		0.962			0.995		0.950			0.950		
Satd. Flow (prot)	0	1740	0	0	1629	0	1770	5080	0	1770	5070	0
Flt Permitted		0.464			0.960		0.950			0.950		
Satd. Flow (perm)	0	839	0	0	1572	0	1770	5080	0	1770	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			203			1			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			854			3282			1825	
Travel Time (s)		9.6			19.4			74.6			41.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	11	0	3	24	0	203	16	2279	23	47	1599	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	227	0	16	2302	0	47	1633	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

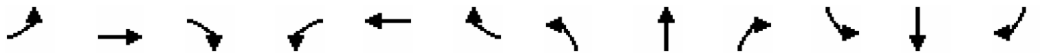
Lanes, Volumes, Timings
2: SH 35/SH35 & Knapp Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		25.0	45.0		25.0	45.0	
Total Split (s)	25.0	25.0		25.0	25.0		45.0	45.0		45.0	45.0	
Total Split (%)	21.7%	21.7%		21.7%	21.7%		39.1%	39.1%		39.1%	39.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		5.0	6.0		5.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)		7.7			7.7		6.3	39.7		7.3	44.9	
Actuated g/C Ratio		0.12			0.12		0.09	0.59		0.11	0.67	
v/c Ratio		0.09			0.63		0.10	0.76		0.24	0.48	
Control Delay (s/veh)		1.0			15.3		32.9	14.6		33.1	7.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		1.0			15.3		32.9	14.6		33.1	7.0	
LOS		A			B		C	B		C	A	
Approach Delay (s/veh)		1.0			15.3			14.8			7.7	
Approach LOS		A			B			B			A	
90th %ile Green (s)	12.7	12.7		12.7	12.7		7.5	39.0		9.7	41.2	
90th %ile Term Code	Hold	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	8.9	8.9		8.9	8.9		0.0	39.0		8.2	52.2	
70th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
50th %ile Green (s)	6.6	6.6		6.6	6.6		0.0	39.0		7.2	51.2	
50th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
30th %ile Green (s)	5.5	5.5		5.5	5.5		0.0	39.0		0.0	39.0	
30th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	5.5	5.5		5.5	5.5		0.0	39.0		0.0	39.0	
10th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Skip	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 66.9			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 12.0		Intersection LOS: B	
Intersection Capacity Utilization 63.4%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 78.4			
70th %ile Actuated Cycle: 73.1			
50th %ile Actuated Cycle: 69.8			
30th %ile Actuated Cycle: 56.5			
10th %ile Actuated Cycle: 56.5			

Splits and Phases: 2: SH 35/SH35 & Knapp Road



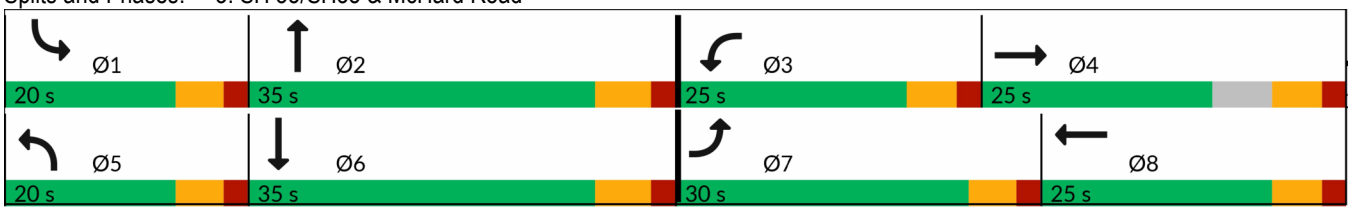


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	426	435	431	221	571	117	271	1594	127	64	1152	306
Future Volume (vph)	426	435	431	221	571	117	271	1594	127	64	1152	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	200		150	150		150	500		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.925			0.975			0.989			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3274	0	1770	3451	0	1770	5029	0	1770	4923	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3274	0	1770	3451	0	1770	5029	0	1770	4923	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		208			19			11			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1206			2764			3429			3282	
Travel Time (s)		27.4			62.8			77.9			74.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	463	473	468	240	621	127	295	1733	138	70	1252	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	463	941	0	240	748	0	295	1871	0	70	1585	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	8.0		3.0	8.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	20.0	24.0		15.0	24.0		15.0	30.0		15.0	30.0	
Total Split (s)	30.0	25.0		25.0	25.0		20.0	35.0		20.0	35.0	
Total Split (%)	27.3%	22.7%		22.7%	22.7%		18.2%	31.8%		18.2%	31.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.5		6.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	24.0	25.2		17.8	19.0		14.0	35.2		9.7	28.5	
Actuated g/C Ratio	0.22	0.23		0.16	0.17		0.13	0.32		0.09	0.26	
v/c Ratio	1.20	1.03		0.84	1.22		1.31	1.16		0.45	1.20	
Control Delay (s/veh)	150.6	71.9		70.0	153.5		207.0	113.6		56.0	133.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	150.6	71.9		70.0	153.5		207.0	113.6		56.0	133.6	
LOS	F	E		E	F		F	F		E	F	
Approach Delay (s/veh)		97.9			133.2			126.3			130.3	
Approach LOS		F			F			F			F	
90th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	29.1		13.4	28.5	
90th %ile Term Code	Max	Hold		Max	Max		Max	Hold		Gap	MaxR	
70th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	31.3		11.2	28.5	
70th %ile Term Code	Max	Hold		Max	Max		Max	Hold		Gap	MaxR	
50th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	32.8		9.7	28.5	
50th %ile Term Code	Max	Hold		Max	Max		Max	Hold		Gap	MaxR	
30th %ile Green (s)	24.0	25.1		17.9	19.0		14.0	34.3		8.2	28.5	
30th %ile Term Code	Max	Hold		Gap	Max		Max	Hold		Gap	MaxR	
10th %ile Green (s)	24.0	29.1		13.9	19.0		14.0	48.5		0.0	28.5	
10th %ile Term Code	Max	Hold		Gap	Max		Max	Hold		Skip	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.31			
Intersection Signal Delay (s/veh): 122.0		Intersection LOS: F	
Intersection Capacity Utilization 107.6%		ICU Level of Service G	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 110			
70th %ile Actuated Cycle: 110			
50th %ile Actuated Cycle: 110			
30th %ile Actuated Cycle: 110			
10th %ile Actuated Cycle: 110			

Splits and Phases: 3: SH 35/SH35 & McHard Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	16	78	4	28	101	1881	151	61	1332	24
Future Volume (vph)	0	0	16	78	4	28	101	1881	151	61	1332	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	120		0	180		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.865				0.850		0.989			0.997	
Flt Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	1611	0	0	1777	1583	1770	5029	0	1770	5070	0
Flt Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	1611	0	0	1777	1583	1770	5029	0	1770	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		542				86		6			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		568			482			1254			3429	
Travel Time (s)		12.9			11.0			28.5			77.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	17	85	4	30	110	2045	164	66	1448	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	89	30	110	2209	0	66	1474	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turn Type		NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
4: SH 35/SH35 & PISD

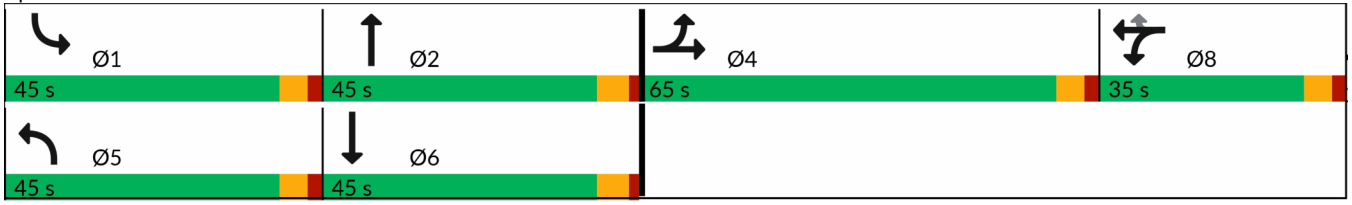
09/16/2024

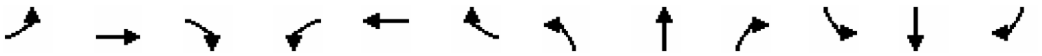
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		5.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0		25.0	25.0	25.0	25.0	45.0		25.0	24.0	
Total Split (s)	65.0	65.0		35.0	35.0	35.0	45.0	45.0		45.0	45.0	
Total Split (%)	34.2%	34.2%		18.4%	18.4%	18.4%	23.7%	23.7%		23.7%	23.7%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Act Effct Green (s)		10.2			9.9	9.9	10.9	45.3		8.9	40.4	
Actuated g/C Ratio		0.12			0.12	0.12	0.13	0.53		0.10	0.47	
v/c Ratio		0.03			0.43	0.12	0.48	0.82		0.36	0.61	
Control Delay (s/veh)		0.1			44.1	0.9	44.0	24.0		44.0	20.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		0.1			44.1	0.9	44.0	24.0		44.0	20.2	
LOS		A			D	A	D	C		D	C	
Approach Delay (s/veh)		0.1			33.2			24.9			21.2	
Approach LOS		A			C			C			C	
90th %ile Green (s)	10.0	10.0		13.9	13.9	13.9	15.5	42.3		12.2	39.0	
90th %ile Term Code	Min	Min		Gap	Gap	Gap	Gap	Hold		Gap	MaxR	
70th %ile Green (s)	10.0	10.0		11.7	11.7	11.7	13.0	41.7		10.3	39.0	
70th %ile Term Code	Min	Min		Gap	Gap	Gap	Gap	Hold		Gap	MaxR	
50th %ile Green (s)	0.0	0.0		9.4	9.4	9.4	10.3	40.8		8.5	39.0	
50th %ile Term Code	Skip	Skip		Gap	Gap	Gap	Gap	Hold		Gap	MaxR	
30th %ile Green (s)	0.0	0.0		8.3	8.3	8.3	9.1	40.6		7.5	39.0	
30th %ile Term Code	Skip	Skip		Gap	Gap	Gap	Gap	Hold		Gap	MaxR	
10th %ile Green (s)	0.0	0.0		6.9	6.9	6.9	7.6	55.4		0.0	41.8	
10th %ile Term Code	Skip	Skip		Gap	Gap	Gap	Gap	Dwell		Skip	Dwell	

Intersection Summary

Area Type: Other
Cycle Length: 190
Actuated Cycle Length: 85.1
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay (s/veh): 23.6 Intersection LOS: C
Intersection Capacity Utilization 69.3% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 102.4
70th %ile Actuated Cycle: 97.7
50th %ile Actuated Cycle: 76.7
30th %ile Actuated Cycle: 74.4
10th %ile Actuated Cycle: 74.3

Splits and Phases: 4: SH 35/SH35 & PISD





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	195	89	117	123	235	80	1679	64	150	1279	55
Future Volume (vph)	170	195	89	117	123	235	80	1679	64	150	1279	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	200		100	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.953			0.902			0.994			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1775	0	1770	1680	0	1770	5055	0	1770	5055	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1775	0	1770	1680	0	1770	5055	0	1770	5055	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			49			3			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2722			832			2002			1254	
Travel Time (s)		61.9			18.9			45.5			28.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	185	212	97	127	134	255	87	1825	70	163	1390	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	309	0	127	389	0	87	1895	0	163	1450	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
5: SH 35 & W Orange Street

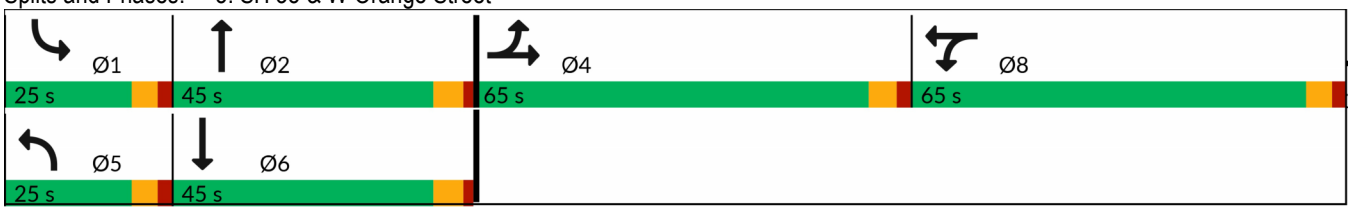
09/16/2024

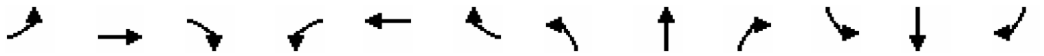
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		5.0	5.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0		25.0	25.0		20.0	45.0		25.0	45.0	
Total Split (s)	65.0	65.0		65.0	65.0		25.0	45.0		25.0	45.0	
Total Split (%)	32.5%	32.5%		32.5%	32.5%		12.5%	22.5%		12.5%	22.5%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	32.4	32.4		38.1	38.1		13.1	39.8		19.1	45.8	
Actuated g/C Ratio	0.21	0.21		0.25	0.25		0.09	0.26		0.12	0.30	
v/c Ratio	0.50	0.81		0.29	0.86		0.58	1.45		0.74	0.96	
Control Delay (s/veh)	59.3	72.9		49.1	67.4		87.3	245.7		87.8	68.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	59.3	72.9		49.1	67.4		87.3	245.7		87.8	68.3	
LOS	E	E		D	E		F	F		F	E	
Approach Delay (s/veh)		67.8			62.9			238.7			70.3	
Approach LOS		E			E			F			E	
90th %ile Green (s)	48.6	48.6		57.7	57.7		19.0	39.0		19.0	39.0	
90th %ile Term Code	Gap	Gap		Gap	Gap		Max	MaxR		Max	MaxR	
70th %ile Green (s)	38.3	38.3		44.9	44.9		15.7	39.0		19.0	42.3	
70th %ile Term Code	Gap	Gap		Gap	Gap		Gap	MaxR		Max	Hold	
50th %ile Green (s)	32.5	32.5		38.1	38.1		13.2	39.0		19.0	44.8	
50th %ile Term Code	Gap	Gap		Gap	Gap		Gap	MaxR		Max	Hold	
30th %ile Green (s)	26.3	26.3		30.9	30.9		10.8	39.0		19.0	47.2	
30th %ile Term Code	Gap	Gap		Gap	Gap		Gap	MaxR		Max	Hold	
10th %ile Green (s)	20.1	20.1		23.5	23.5		8.1	39.0		18.0	48.9	
10th %ile Term Code	Gap	Gap		Gap	Gap		Gap	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 200
Actuated Cycle Length: 154
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.45
Intersection Signal Delay (s/veh): 141.7 Intersection LOS: F
Intersection Capacity Utilization 92.5% ICU Level of Service F
Analysis Period (min) 15
90th %ile Actuated Cycle: 188.3
70th %ile Actuated Cycle: 165.2
50th %ile Actuated Cycle: 152.6
30th %ile Actuated Cycle: 139.2
10th %ile Actuated Cycle: 124.6

Splits and Phases: 5: SH 35 & W Orange Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	407	665	198	155	483	139	218	1116	129	90	629	198
Future Volume (vph)	407	665	198	155	483	139	218	1116	129	90	629	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	380		0	180		0	180		160
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.966			0.967			0.984			0.964	
Flt Protected	0.950			0.950	0.999		0.950			0.950		
Satd. Flow (prot)	1770	3419	0	1610	3275	0	1770	3483	0	1770	3412	0
Flt Permitted	0.950			0.950	0.999		0.950			0.950		
Satd. Flow (perm)	1770	3419	0	1610	3275	0	1770	3483	0	1770	3412	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			19			10			33	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4203			1078			2138			5584	
Travel Time (s)		95.5			24.5			48.6			126.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	442	723	215	168	525	151	237	1213	140	98	684	215
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	442	938	0	151	693	0	237	1353	0	98	899	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5			1		
Permitted Phases								2			6	
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
8: SH 35 & Magnoila Parkway

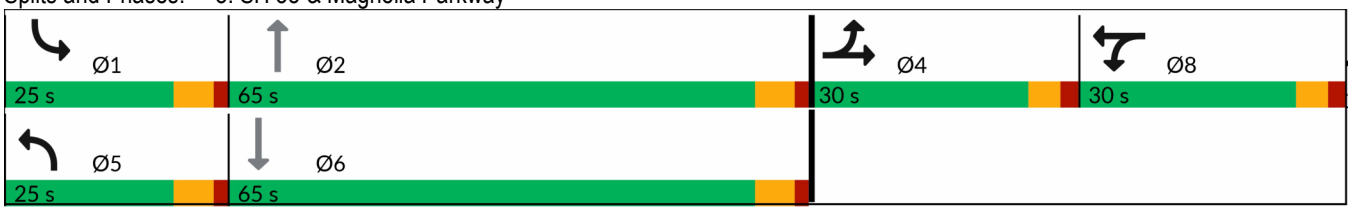
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		20.0	45.0		24.0	45.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	65.0		25.0	65.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		16.7%	43.3%		16.7%	43.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		Max	Max	
Act Effct Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.13	0.39		0.13	0.39	
v/c Ratio	1.53	1.63		0.58	1.26		1.06	0.98		0.44	0.66	
Control Delay (s/veh)	295.4	327.7		67.7	179.0		136.8	65.0		67.3	38.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	295.4	327.7		67.7	179.0		136.8	65.0		67.3	38.6	
LOS	F	F		E	F		F	E		E	D	
Approach Delay (s/veh)		317.3			159.1			75.7			41.5	
Approach LOS		F			F			E			D	
90th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
70th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
70th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
50th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
50th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
30th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
30th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
10th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
10th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	

Intersection Summary

Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.63			
Intersection Signal Delay (s/veh): 152.5		Intersection LOS: F	
Intersection Capacity Utilization 98.7%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 150			
70th %ile Actuated Cycle: 150			
50th %ile Actuated Cycle: 150			
30th %ile Actuated Cycle: 150			
10th %ile Actuated Cycle: 150			

Splits and Phases: 8: SH 35 & Magnoila Parkway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	4	0	19	16	110	0	1397	53	238	703	40
Future Volume (vph)	1	4	0	19	16	110	0	1397	53	238	703	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt					0.897			0.994			0.992	
Flt Protected		0.990			0.993					0.950		
Satd. Flow (prot)	0	1844	1863	0	1659	0	1863	3518	0	1770	3511	0
Flt Permitted		0.990			0.993					0.181		
Satd. Flow (perm)	0	1844	1863	0	1659	0	1863	3518	0	337	3511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					120			5			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		688			655			2138			2138	
Travel Time (s)		15.6			14.9			48.6			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	4	0	21	17	120	0	1518	58	259	764	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	5	0	0	158	0	0	1576	0	259	807	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
9: SH 35/SH35 & High School

09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (%)	28.8%	28.8%	28.8%	28.8%	28.8%		13.7%	28.8%		13.7%	28.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	Max		None	None	
Act Effct Green (s)		5.8			7.0			17.4		26.7	28.1	
Actuated g/C Ratio		0.14			0.17			0.42		0.64	0.68	
v/c Ratio		0.02			0.42			1.07		0.66	0.34	
Control Delay (s/veh)		19.0			10.3			63.3		19.5	5.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay (s/veh)		19.0			10.3			63.3		19.5	5.5	
LOS		B			B			E		B	A	
Approach Delay (s/veh)		19.0			10.3			63.3			8.9	
Approach LOS		B			B			E			A	
90th %ile Green (s)	6.2	6.2	6.2	10.6	10.6		0.0	16.0		5.0	25.5	
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip	MaxR		Max	Hold	
70th %ile Green (s)	0.0	0.0	0.0	7.6	7.6		0.0	16.0		5.0	25.5	
70th %ile Term Code	Skip	Skip	Skip	Gap	Gap		Skip	MaxR		Max	Hold	
50th %ile Green (s)	0.0	0.0	0.0	6.4	6.4		0.0	16.0		5.0	25.5	
50th %ile Term Code	Skip	Skip	Skip	Gap	Gap		Skip	MaxR		Max	Hold	
30th %ile Green (s)	0.0	0.0	0.0	5.5	5.5		0.0	16.0		5.0	25.5	
30th %ile Term Code	Skip	Skip	Skip	Gap	Gap		Skip	MaxR		Max	Hold	
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	20.3		5.0	29.8	
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Max	Dwell	

Intersection Summary

Area Type: Other

Cycle Length: 69.5

Actuated Cycle Length: 41.6

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.07

Intersection Signal Delay (s/veh): 39.6 Intersection LOS: D

Intersection Capacity Utilization 79.2% ICU Level of Service D

Analysis Period (min) 15

90th %ile Actuated Cycle: 54.3

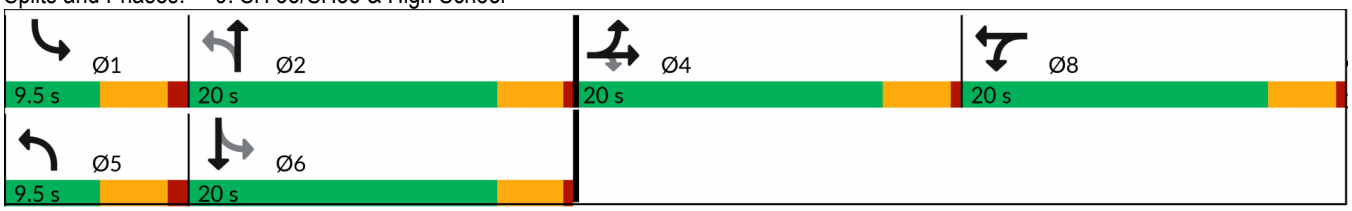
70th %ile Actuated Cycle: 41.1

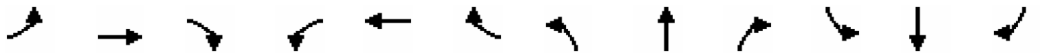
50th %ile Actuated Cycle: 39.9

30th %ile Actuated Cycle: 39

10th %ile Actuated Cycle: 33.8

Splits and Phases: 9: SH 35/SH35 & High School





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	502	419	38	278	102	280	759	25	150	517	158
Future Volume (vph)	225	502	419	38	278	102	280	759	25	150	517	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	0.95	0.91	0.91	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.933			0.960			0.995			0.965	
Flt Protected	0.950	0.999		0.950			0.950			0.950		
Satd. Flow (prot)	1610	3160	0	1610	3255	0	1770	3522	0	1770	3415	0
Flt Permitted	0.950	0.999		0.950			0.950			0.950		
Satd. Flow (perm)	1610	3160	0	1610	3255	0	1770	3522	0	1770	3415	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			28			2			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		782			1312			6422			2138	
Travel Time (s)		17.8			29.8			146.0			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	245	546	455	41	302	111	304	825	27	163	562	172
Shared Lane Traffic (%)	10%			10%								
Lane Group Flow (vph)	220	1026	0	37	417	0	304	852	0	163	734	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		42			42			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
10: SH 35/SH35 & Bailey Road

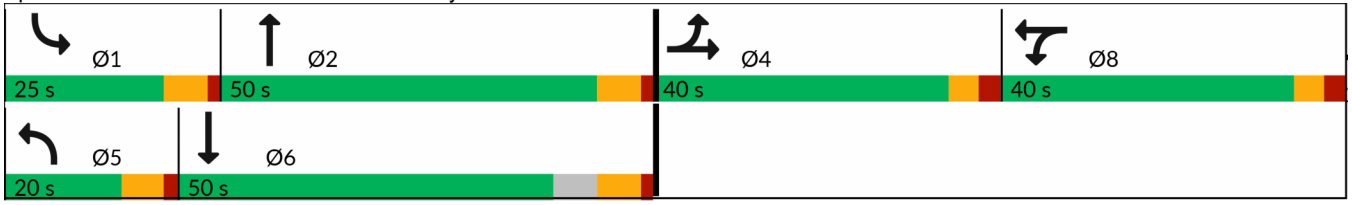
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		20.0	50.0		25.0	50.0	
Total Split (s)	40.0	40.0		40.0	40.0		20.0	50.0		25.0	50.0	
Total Split (%)	25.8%	25.8%		25.8%	25.8%		12.9%	32.3%		16.1%	32.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	34.1	34.1		22.6	22.6		13.5	43.6		16.7	46.8	
Actuated g/C Ratio	0.24	0.24		0.16	0.16		0.10	0.31		0.12	0.33	
v/c Ratio	0.57	1.21		0.14	0.77		1.81	0.79		0.78	0.64	
Control Delay (s/veh)	55.7	145.3		52.6	63.6		421.2	51.9		86.9	42.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	55.7	145.3		52.6	63.6		421.2	51.9		86.9	42.4	
LOS	E	F		D	E		F	D		F	D	
Approach Delay (s/veh)		129.5			62.7			149.1			50.5	
Approach LOS		F			E			F			D	
90th %ile Green (s)	34.0	34.0		29.9	29.9		13.5	43.5		18.5	48.5	
90th %ile Term Code	Max	Max		Gap	Gap		Max	MaxR		Max	Hold	
70th %ile Green (s)	34.0	34.0		26.0	26.0		13.5	43.5		18.5	48.5	
70th %ile Term Code	Max	Max		Gap	Gap		Max	MaxR		Max	Hold	
50th %ile Green (s)	34.0	34.0		22.4	22.4		13.5	43.5		18.5	48.5	
50th %ile Term Code	Max	Max		Gap	Gap		Max	MaxR		Max	Hold	
30th %ile Green (s)	34.0	34.0		19.7	19.7		13.5	43.5		16.2	46.2	
30th %ile Term Code	Max	Max		Gap	Gap		Max	MaxR		Gap	Hold	
10th %ile Green (s)	34.0	34.0		15.9	15.9		13.5	43.5		12.2	42.2	
10th %ile Term Code	Max	Max		Gap	Gap		Max	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 155
Actuated Cycle Length: 142.1
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.81
Intersection Signal Delay (s/veh): 108.6 Intersection LOS: F
Intersection Capacity Utilization 86.3% ICU Level of Service E
Analysis Period (min) 15
90th %ile Actuated Cycle: 150.9
70th %ile Actuated Cycle: 147
50th %ile Actuated Cycle: 143.4
30th %ile Actuated Cycle: 138.4
10th %ile Actuated Cycle: 130.6

Splits and Phases: 10: SH 35/SH35 & Bailey Road



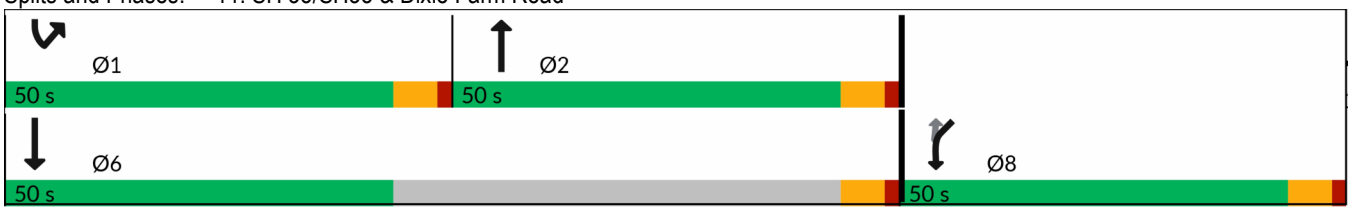


Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	919	876	346	536	493	292
Future Volume (vph)	919	876	346	536	493	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	320		180	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	1.00
Ped Bike Factor						
Frt	0.927					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3281	0	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3281	0	1770	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	162					317
Link Speed (mph)	30			30	30	
Link Distance (ft)	8103			6422	2765	
Travel Time (s)	184.2			146.0	62.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	999	952	376	583	536	317
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1951	0	376	583	536	317
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Minimum Initial (s)	15.0		5.0	15.0	5.0	5.0
Minimum Split (s)	45.0		30.0	45.0	30.0	30.0
Total Split (s)	50.0		50.0	50.0	50.0	50.0
Total Split (%)	33.3%		33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0
All-Red Time (s)	1.5		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		6.5	6.5	6.5	6.5
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max		None	Max	None	None
Act Effct Green (s)	44.1		30.4	81.1	25.0	25.0
Actuated g/C Ratio	0.37		0.25	0.68	0.21	0.21
v/c Ratio	1.48		0.83	0.24	0.75	0.54
Control Delay (s/veh)	249.7		59.0	8.0	51.7	8.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	249.7		59.0	8.0	51.7	8.2
LOS	F		E	A	D	A
Approach Delay (s/veh)	249.7			28.0	35.5	
Approach LOS	F			C	D	
90th %ile Green (s)	43.5		43.5	93.5	34.4	34.4
90th %ile Term Code	MaxR		Max	Hold	Gap	Gap
70th %ile Green (s)	43.5		35.5	85.5	28.6	28.6
70th %ile Term Code	MaxR		Gap	Hold	Gap	Gap
50th %ile Green (s)	43.5		30.3	80.3	25.0	25.0
50th %ile Term Code	MaxR		Gap	Hold	Gap	Gap
30th %ile Green (s)	43.5		25.7	75.7	21.8	21.8
30th %ile Term Code	MaxR		Gap	Hold	Gap	Gap
10th %ile Green (s)	43.5		19.7	69.7	16.9	16.9
10th %ile Term Code	MaxR		Gap	Hold	Gap	Gap

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 119.3			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.48			
Intersection Signal Delay (s/veh): 144.7		Intersection LOS: F	
Intersection Capacity Utilization 103.0%		ICU Level of Service G	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 140.9			
70th %ile Actuated Cycle: 127.1			
50th %ile Actuated Cycle: 118.3			
30th %ile Actuated Cycle: 110.5			
10th %ile Actuated Cycle: 99.6			

Splits and Phases: 11: SH 35/SH35 & Dixie Farm Road



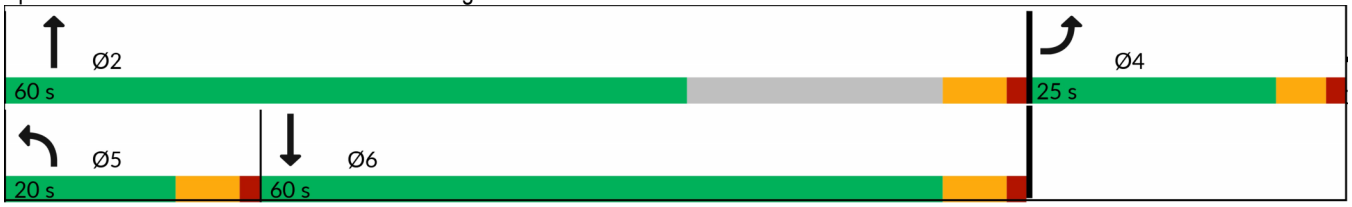


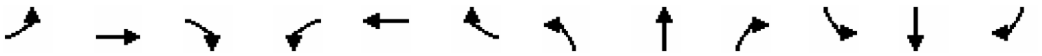
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	102	337	136	1699	1004	55
Future Volume (vph)	102	337	136	1699	1004	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	180			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.896				0.992	
Flt Protected	0.988		0.950			
Satd. Flow (prot)	1649	0	1770	3539	3511	0
Flt Permitted	0.988		0.950			
Satd. Flow (perm)	1649	0	1770	3539	3511	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	139				8	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1279			693	8103	
Travel Time (s)	29.1			15.8	184.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	111	366	148	1847	1091	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	477	0	148	1847	1151	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (ft)	20		20	100	100	
Trailing Detector (ft)	0		0	0	0	
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Detector Phase	4		5	2	6	
Switch Phase						

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Initial (s)	5.0		5.0	20.0	20.0	
Minimum Split (s)	25.0		20.0	60.0	60.0	
Total Split (s)	25.0		20.0	60.0	60.0	
Total Split (%)	23.8%		19.0%	57.1%	57.1%	
Yellow Time (s)	4.0		5.0	5.0	5.0	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.5		6.5	6.5	6.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	19.6		11.7	59.5	41.3	
Actuated g/C Ratio	0.21		0.13	0.65	0.45	
v/c Ratio	1.03		0.65	0.80	0.72	
Control Delay (s/veh)	77.1		53.1	14.6	23.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	77.1		53.1	14.6	23.3	
LOS	E		D	B	C	
Approach Delay (s/veh)	77.1			17.5	23.3	
Approach LOS	E			B	C	
90th %ile Green (s)	19.5		13.5	71.3	51.3	
90th %ile Term Code	Max		Max	Hold	Gap	
70th %ile Green (s)	19.5		13.5	63.3	43.3	
70th %ile Term Code	Max		Max	Hold	Gap	
50th %ile Green (s)	19.5		12.8	56.9	37.6	
50th %ile Term Code	Max		Gap	Hold	Gap	
30th %ile Green (s)	19.5		10.7	53.5	36.3	
30th %ile Term Code	Max		Gap	MaxR	Hold	
10th %ile Green (s)	19.5		8.3	53.5	38.7	
10th %ile Term Code	Max		Gap	MaxR	Hold	

Intersection Summary	
Area Type:	Other
Cycle Length: 105	
Actuated Cycle Length: 91.2	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay (s/veh): 27.1	Intersection LOS: C
Intersection Capacity Utilization 83.4%	ICU Level of Service E
Analysis Period (min) 15	
90th %ile Actuated Cycle: 102.8	
70th %ile Actuated Cycle: 94.8	
50th %ile Actuated Cycle: 88.4	
30th %ile Actuated Cycle: 85	
10th %ile Actuated Cycle: 85	

Splits and Phases: 12: SH 35/SH35 & Hastings Canon Road





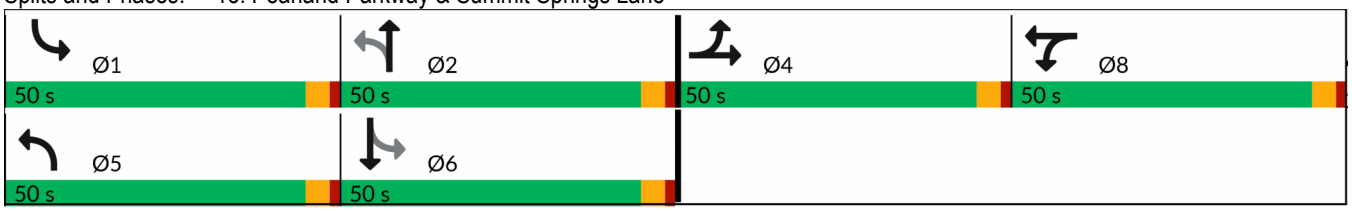
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	3	74	12	0	36	144	2158	9	10	1055	65
Future Volume (vph)	163	3	74	12	0	36	144	2158	9	10	1055	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	180		150	180		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.855			0.850			0.999			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1593	0	1770	1583	0	1770	3536	0	1770	3507	0
Flt Permitted	0.950			0.950			0.106			0.080		
Satd. Flow (perm)	1770	1593	0	1770	1583	0	197	3536	0	149	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		80			495						3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1005			878			1367			830	
Travel Time (s)		22.8			20.0			31.1			18.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	177	3	80	13	0	39	157	2346	10	11	1147	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	83	0	13	39	0	157	2356	0	11	1218	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
13: Pearland Parkway & Summit Springs Lane 09/16/2024

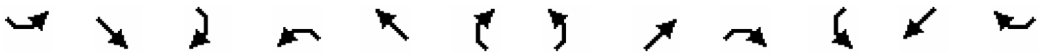
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		15.0	45.0		15.0	45.0	
Total Split (s)	50.0	50.0		50.0	50.0		50.0	50.0		50.0	50.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	25.0%		25.0%	25.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	15.5	15.5		8.1	8.1		62.9	60.9		51.6	45.7	
Actuated g/C Ratio	0.16	0.16		0.08	0.08		0.64	0.62		0.52	0.46	
v/c Ratio	0.63	0.26		0.09	0.07		0.49	1.08		0.06	0.75	
Control Delay (s/veh)	51.0	11.7		48.3	0.2		16.3	66.0		10.4	27.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	51.0	11.7		48.3	0.2		16.3	66.0		10.4	27.5	
LOS	D	B		D	A		B	E		B	C	
Approach Delay (s/veh)		38.4			12.2			62.9			27.4	
Approach LOS		D			B			E			C	
90th %ile Green (s)	21.7	21.7		8.0	8.0		17.3	55.9		6.4	45.0	
90th %ile Term Code	Gap	Gap		Min	Min		Gap	Hold		Gap	Max	
70th %ile Green (s)	18.0	18.0		8.0	8.0		14.4	64.4		0.0	45.0	
70th %ile Term Code	Gap	Gap		Min	Min		Gap	Hold		Skip	Max	
50th %ile Green (s)	15.6	15.6		8.0	8.0		12.0	62.0		0.0	45.0	
50th %ile Term Code	Gap	Gap		Min	Min		Gap	Hold		Skip	Max	
30th %ile Green (s)	13.5	13.5		8.0	8.0		10.3	60.3		0.0	45.0	
30th %ile Term Code	Gap	Gap		Min	Min		Gap	Hold		Skip	Max	
10th %ile Green (s)	10.1	10.1		0.0	0.0		7.6	57.6		0.0	45.0	
10th %ile Term Code	Gap	Gap		Skip	Skip		Gap	Hold		Skip	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 200			
Actuated Cycle Length: 98.5			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay (s/veh): 49.9		Intersection LOS: D	
Intersection Capacity Utilization 92.3%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 112			
70th %ile Actuated Cycle: 105.4			
50th %ile Actuated Cycle: 100.6			
30th %ile Actuated Cycle: 96.8			
10th %ile Actuated Cycle: 77.7			

Splits and Phases: 13: Pearland Parkway & Summit Springs Lane



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	256	710	135	3	1267	135	300	126	19	201	221	648
Future Volume (vph)	256	710	135	3	1267	135	300	126	19	201	221	648
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		120	120		120	120		120	120		120
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.986			0.990			0.888	
Flt Protected	0.950			0.950			0.950	0.975		0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3490	0	1610	3272	0	1770	3143	0
Flt Permitted	0.950			0.950			0.950	0.975		0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3490	0	1610	3272	0	1770	3143	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135		9			4			179	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		810			670			666			826	
Travel Time (s)		18.4			15.2			15.1			18.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	278	772	147	3	1377	147	326	137	21	218	240	704
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	278	772	147	3	1524	0	163	321	0	218	944	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0	0	0	0		0	2		0	2	
Detector Template	Thru	Thru	Thru	Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	0	0	0	0		0	100		0	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4									
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

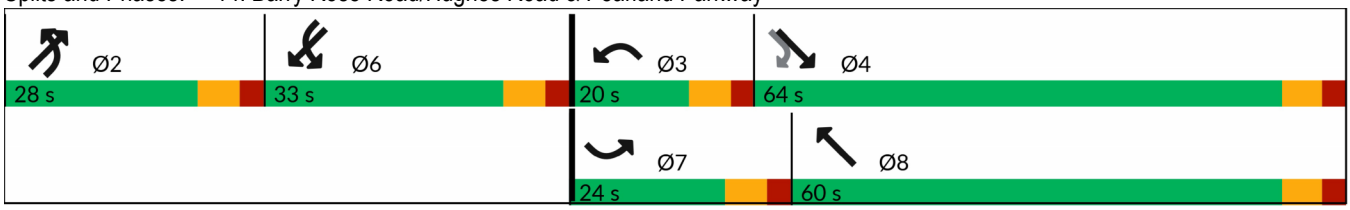


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	55.0	55.0	20.0	55.0		25.0	25.0		25.0	25.0	
Total Split (s)	24.0	64.0	64.0	20.0	60.0		28.0	28.0		33.0	33.0	
Total Split (%)	16.6%	44.1%	44.1%	13.8%	41.4%		19.3%	19.3%		22.8%	22.8%	
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	None	None	None	None		Max	Max		None	None	
Act Effct Green (s)	17.0	74.3	74.3	5.9	53.0		21.0	21.0		26.0	26.0	
Actuated g/C Ratio	0.12	0.51	0.51	0.04	0.37		0.14	0.14		0.18	0.18	
v/c Ratio	1.34	0.43	0.17	0.04	1.19		0.70	0.67		0.69	1.64dr	
Control Delay (s/veh)	229.7	23.7	4.6	67.7	133.7		75.7	65.8		68.0	194.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	229.7	23.7	4.6	67.7	133.7		75.7	65.8		68.0	194.3	
LOS	F	C	A	E	F		E	E		E	F	
Approach Delay (s/veh)		69.2			133.6			69.1			170.6	
Approach LOS		E			F			E			F	
90th %ile Green (s)	17.0	63.4	63.4	6.6	53.0		21.0	21.0		26.0	26.0	
90th %ile Term Code	Max	Hold	Hold	Gap	Max		MaxR	MaxR		Max	Max	
70th %ile Green (s)	17.0	77.0	77.0	0.0	53.0		21.0	21.0		26.0	26.0	
70th %ile Term Code	Max	Hold	Hold	Skip	Max		MaxR	MaxR		Max	Max	
50th %ile Green (s)	17.0	77.0	77.0	0.0	53.0		21.0	21.0		26.0	26.0	
50th %ile Term Code	Max	Hold	Hold	Skip	Max		MaxR	MaxR		Max	Max	
30th %ile Green (s)	17.0	77.0	77.0	0.0	53.0		21.0	21.0		26.0	26.0	
30th %ile Term Code	Max	Hold	Hold	Skip	Max		MaxR	MaxR		Max	Max	
10th %ile Green (s)	17.0	77.0	77.0	0.0	53.0		21.0	21.0		26.0	26.0	
10th %ile Term Code	Max	Hold	Hold	Skip	Max		MaxR	MaxR		Max	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 145			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.34			
Intersection Signal Delay (s/veh): 118.6		Intersection LOS: F	
Intersection Capacity Utilization 112.4%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 145			
70th %ile Actuated Cycle: 145			
50th %ile Actuated Cycle: 145			
30th %ile Actuated Cycle: 145			
10th %ile Actuated Cycle: 145			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 14: Barry Rose Road/Hughes Road & Pearland Parkway



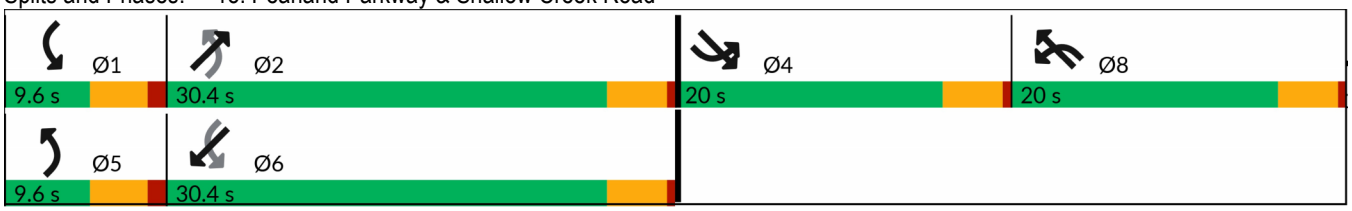
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	34	1	0	47	0	44	18	1245	44	13	801	59
Future Volume (vph)	34	1	0	47	0	44	18	1245	44	13	801	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	200		150	120		150
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt					0.927			0.995			0.990	
Flt Protected		0.954			0.975		0.950			0.950		
Satd. Flow (prot)	0	3376	0	0	3199	0	1770	3522	0	1770	3504	0
Flt Permitted		0.954			0.975		0.259			0.119		
Satd. Flow (perm)	0	3376	0	0	3199	0	482	3522	0	222	3504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					130			5			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		299			285			1148			332	
Travel Time (s)		6.8			6.5			26.1			7.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	37	1	0	51	0	48	20	1353	48	14	871	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	0	0	99	0	20	1401	0	14	935	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		0	0		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	20	0		20	0		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
15: Pearland Parkway & Shallow Creek Road 09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		9.6	30.4		9.6	30.4	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		12.0%	38.0%		12.0%	38.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)		6.2			5.7		34.5	35.0		34.5	35.0	
Actuated g/C Ratio		0.12			0.11		0.67	0.68		0.67	0.68	
v/c Ratio		0.09			0.21		0.04	0.58		0.05	0.39	
Control Delay (s/veh)		22.1			4.9		5.5	10.5		5.7	7.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		22.1			4.9		5.5	10.5		5.7	7.4	
LOS		C			A		A	B		A	A	
Approach Delay (s/veh)		22.1			4.9			10.4			7.3	
Approach LOS		C			A			B			A	
90th %ile Green (s)	7.0	7.0		6.5	6.5		5.1	26.4		5.1	26.4	
90th %ile Term Code	Gap	Gap		Gap	Gap		Max	MaxR		Max	Max	
70th %ile Green (s)	6.5	6.5		5.5	5.5		0.0	26.4		0.0	26.4	
70th %ile Term Code	Gap	Gap		Gap	Gap		Skip	MaxR		Skip	Hold	
50th %ile Green (s)	0.0	0.0		5.5	5.5		0.0	31.4		0.0	31.4	
50th %ile Term Code	Skip	Skip		Gap	Gap		Skip	Dwell		Skip	Dwell	
30th %ile Green (s)	0.0	0.0		5.5	5.5		0.0	41.4		0.0	41.4	
30th %ile Term Code	Skip	Skip		Gap	Gap		Skip	Dwell		Skip	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	41.4		0.0	41.4	
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Dwell		Skip	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 51.4			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay (s/veh): 9.2		Intersection LOS: A	
Intersection Capacity Utilization 51.8%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 61.5			
70th %ile Actuated Cycle: 50.4			
50th %ile Actuated Cycle: 44.9			
30th %ile Actuated Cycle: 54.9			
10th %ile Actuated Cycle: 45.4			

Splits and Phases: 15: Pearland Parkway & Shallow Creek Road



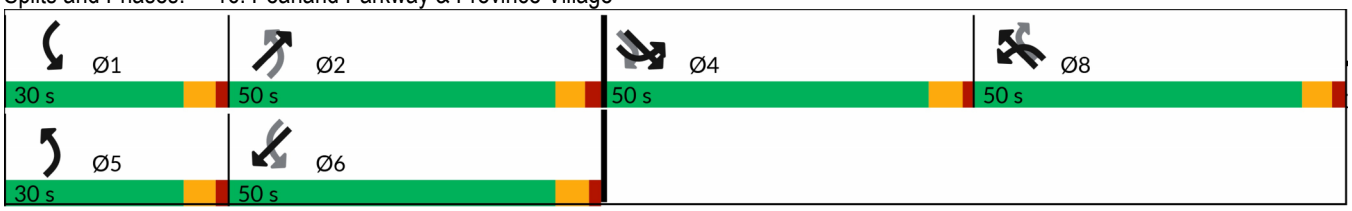
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	58	9	30	28	10	132	78	1045	28	43	870	34
Future Volume (vph)	58	9	30	28	10	132	78	1045	28	43	870	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		150	200		150	120		150
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.996			0.994	
Flt Protected		0.959			0.965		0.950			0.950		
Satd. Flow (prot)	0	1786	1583	0	1798	1583	1770	3525	0	1770	3518	0
Flt Permitted		0.959			0.965		0.095			0.088		
Satd. Flow (perm)	0	1786	1583	0	1798	1583	177	3525	0	164	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			91			143		1			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		737			805			403			1148	
Travel Time (s)		16.8			18.3			9.2			26.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	63	10	33	30	11	143	85	1136	30	47	946	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	73	33	0	41	143	85	1166	0	47	983	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	0	2	1	0	0		1	0	
Detector Template	Left	Thru	Thru	Thru	Thru	Right	Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	50	100	20	0	0		20	0	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
16: Pearland Parkway & Province Village 09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0		3.0	5.0	
Minimum Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	25.0	35.0		25.0	35.0	
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	30.0	50.0		30.0	50.0	
Total Split (%)	27.8%	27.8%	27.8%	27.8%	27.8%	27.8%	16.7%	27.8%		16.7%	27.8%	
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.5	4.0		4.5	4.5	
All-Red Time (s)	1.5	1.5	1.5	2.0	2.0	2.0	1.5	2.0		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	Max	Max	Max	None	Max		None	None	
Act Effct Green (s)		10.8	10.8		44.1	44.1	56.4	48.5		51.6	44.1	
Actuated g/C Ratio		0.08	0.08		0.33	0.33	0.43	0.37		0.39	0.33	
v/c Ratio		0.50	0.16		0.07	0.23	0.45	0.90		0.31	0.84	
Control Delay (s/veh)		70.6	1.6		32.2	6.1	29.5	51.4		26.9	48.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		70.6	1.6		32.2	6.1	29.5	51.4		26.9	48.9	
LOS		E	A		C	A	C	D		C	D	
Approach Delay (s/veh)		49.1			11.9			49.9			47.9	
Approach LOS		D			B			D			D	
90th %ile Green (s)	14.9	14.9	14.9	44.0	44.0	44.0	12.4	47.0		9.4	44.0	
90th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR	MaxR	Gap	Hold		Gap	Max	
70th %ile Green (s)	12.4	12.4	12.4	44.0	44.0	44.0	10.5	46.3		8.2	44.0	
70th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR	MaxR	Gap	Hold		Gap	Max	
50th %ile Green (s)	10.8	10.8	10.8	44.0	44.0	44.0	9.3	45.8		7.5	44.0	
50th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR	MaxR	Gap	Hold		Gap	Max	
30th %ile Green (s)	9.2	9.2	9.2	44.0	44.0	44.0	8.2	45.5		6.7	44.0	
30th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR	MaxR	Gap	Hold		Gap	Max	
10th %ile Green (s)	7.1	7.1	7.1	44.0	44.0	44.0	7.0	57.0		0.0	44.0	
10th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR	MaxR	Gap	Hold		Skip	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 180			
Actuated Cycle Length: 132.4			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay (s/veh): 46.4		Intersection LOS: D	
Intersection Capacity Utilization 58.5%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 139.3			
70th %ile Actuated Cycle: 134.9			
50th %ile Actuated Cycle: 132.1			
30th %ile Actuated Cycle: 129.4			
10th %ile Actuated Cycle: 126.1			

Splits and Phases: 16: Pearland Parkway & Province Village



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Future Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		150	150		150	120		150	450		150
Storage Lanes	1		0	1		0	1		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.95	0.95
Ped Bike Factor												
Frt		0.983			0.961			0.970			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3401	0	1770	3433	0	3433	3433	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3479	0	1770	3401	0	1770	3433	0	3433	3433	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			32			16			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1215			1637			473			570	
Travel Time (s)		27.6			37.2			10.8			13.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	147	1176	154	203	1374	486	212	633	161	409	472	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	1330	0	203	1860	0	212	794	0	409	592	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		0	2		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	100		0	100		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases												
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												

Lanes, Volumes, Timings
17: Pearland Parkway & FM 518

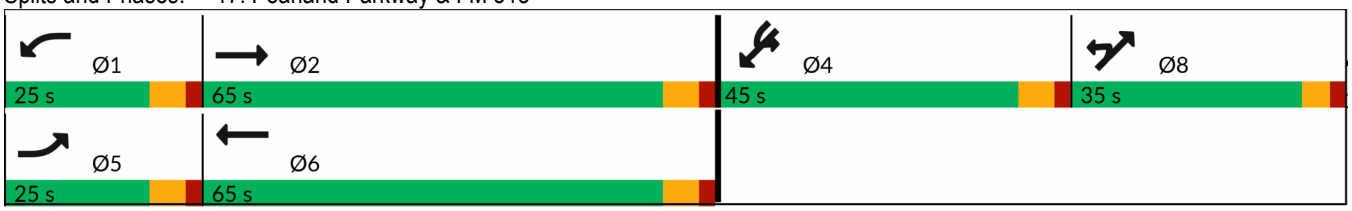
09/16/2024

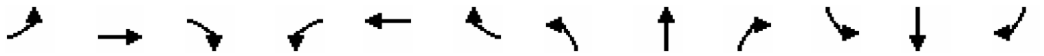
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	3.0	10.0		3.0	10.0		5.0	5.0		7.0	7.0	
Minimum Split (s)	20.0	45.0		20.0	45.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	65.0		25.0	65.0		35.0	35.0		45.0	45.0	
Total Split (%)	14.7%	38.2%		14.7%	38.2%		20.6%	20.6%		26.5%	26.5%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		5.5	5.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)	16.9	58.5		18.5	60.1		29.5	29.5		32.7	32.7	
Actuated g/C Ratio	0.10	0.36		0.11	0.37		0.18	0.18		0.20	0.20	
v/c Ratio	0.81	1.07		1.02	1.47		0.67	1.26		0.60	0.85	
Control Delay (s/veh)	103.1	95.1		138.4	252.6		75.0	181.1		63.6	73.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	103.1	95.1		138.4	252.6		75.0	181.1		63.6	73.9	
LOS	F	F		F	F		E	F		E	E	
Approach Delay (s/veh)		95.9			241.3			158.8			69.7	
Approach LOS		F			F			F			E	
90th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		38.5	38.5	
90th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Max	Max	
70th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		37.0	37.0	
70th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Gap	Gap	
50th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		33.6	33.6	
50th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Gap	Gap	
30th %ile Green (s)	16.7	58.5		18.5	60.3		29.5	29.5		30.3	30.3	
30th %ile Term Code	Gap	Max		Max	Hold		MaxR	MaxR		Gap	Gap	
10th %ile Green (s)	12.6	58.5		18.5	64.4		29.5	29.5		24.8	24.8	
10th %ile Term Code	Gap	Max		Max	Hold		MaxR	MaxR		Gap	Gap	

Intersection Summary

Area Type:	Other		
Cycle Length: 170			
Actuated Cycle Length: 164.3			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.47			
Intersection Signal Delay (s/veh): 156.6		Intersection LOS: F	
Intersection Capacity Utilization 109.1%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 170			
70th %ile Actuated Cycle: 168.5			
50th %ile Actuated Cycle: 165.1			
30th %ile Actuated Cycle: 161.8			
10th %ile Actuated Cycle: 156.3			

Splits and Phases: 17: Pearland Parkway & FM 518





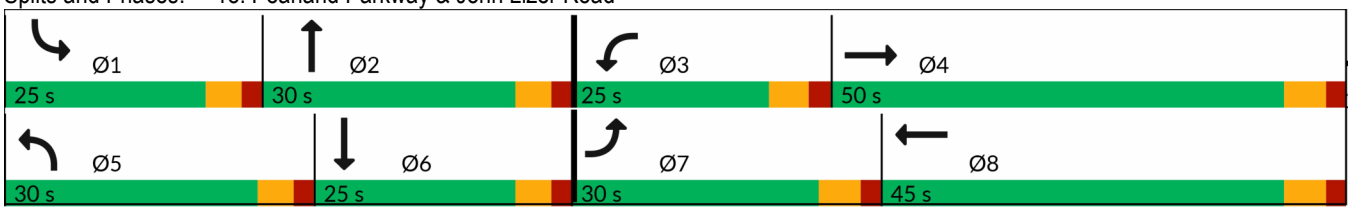
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	348	132	145	247	18	232	576	222	22	440	229
Future Volume (vph)	330	348	132	145	247	18	232	576	222	22	440	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		100	100		100	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.959			0.990			0.958			0.949	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1786	0	1770	1844	0	1770	3391	0	1770	3359	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1786	0	1770	1844	0	1770	3391	0	1770	3359	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			3			38			61	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1007			1264			3595			815	
Travel Time (s)		22.9			28.7			81.7			18.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	359	378	143	158	268	20	252	626	241	24	478	249
Shared Lane Traffic (%)												
Lane Group Flow (vph)	359	521	0	158	288	0	252	867	0	24	727	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			72			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		1	2		1	0		0	0	
Detector Template	Thru	Thru		Left	Thru		Left	Thru		Thru	Thru	
Leading Detector (ft)	0	100		20	100		20	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
18: Pearland Parkway & John Lizer Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	45.0		25.0	45.0		30.0	30.0		25.0	25.0	
Total Split (s)	30.0	50.0		25.0	45.0		30.0	30.0		25.0	25.0	
Total Split (%)	23.1%	38.5%		19.2%	34.6%		23.1%	23.1%		19.2%	19.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)	24.2	38.6		15.3	29.8		24.7	42.0		7.2	19.6	
Actuated g/C Ratio	0.20	0.32		0.13	0.25		0.20	0.35		0.06	0.16	
v/c Ratio	1.02	0.90		0.71	0.63		0.70	0.72		0.23	1.23	
Control Delay (s/veh)	102.4	58.3		69.5	46.3		58.4	40.3		62.2	155.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	102.4	58.3		69.5	46.3		58.4	40.3		62.2	155.2	
LOS	F	E		E	D		E	D		E	F	
Approach Delay (s/veh)		76.3			54.5			44.4			152.2	
Approach LOS		E			D			D			F	
90th %ile Green (s)	24.0	44.0		19.0	39.0		24.5	34.4		9.6	19.5	
90th %ile Term Code	Max	Max		Max	Hold		MaxR	Hold		Gap	Max	
70th %ile Green (s)	24.0	44.0		19.0	39.0		24.5	35.8		8.2	19.5	
70th %ile Term Code	Max	Max		Max	Hold		MaxR	Hold		Gap	Max	
50th %ile Green (s)	24.0	42.4		16.5	34.9		24.5	36.9		7.1	19.5	
50th %ile Term Code	Max	Gap		Gap	Hold		MaxR	Hold		Gap	Max	
30th %ile Green (s)	24.0	34.7		13.4	24.1		24.5	49.5		0.0	19.5	
30th %ile Term Code	Max	Gap		Gap	Hold		MaxR	Hold		Skip	Max	
10th %ile Green (s)	24.0	29.3		9.7	15.0		24.5	49.5		0.0	19.5	
10th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Skip	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 121.4			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.23			
Intersection Signal Delay (s/veh): 79.9		Intersection LOS: E	
Intersection Capacity Utilization 85.9%		ICU Level of Service E	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 130			
70th %ile Actuated Cycle: 130			
50th %ile Actuated Cycle: 125.9			
30th %ile Actuated Cycle: 115.1			
10th %ile Actuated Cycle: 106			

Splits and Phases: 18: Pearland Parkway & John Lizer Road



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	56	235	326	329	568	25	286	30	281	286	30	281
Future Volume (vph)	56	235	326	329	568	25	286	30	281	286	30	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	280		0	0		0
Storage Lanes	1		0	1		0	1		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.913			0.994				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.961			0.957	
Satd. Flow (prot)	1770	3231	0	1770	3518	0	1681	1701	1583	0	1783	1583
Flt Permitted	0.407			0.229			0.950	0.961			0.957	
Satd. Flow (perm)	758	3231	0	427	3518	0	1681	1701	1583	0	1783	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		272			3				305			305
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3595			633			1013			931	
Travel Time (s)		81.7			14.4			23.0			21.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	61	255	354	358	617	27	311	33	305	311	33	305
Shared Lane Traffic (%)							45%					
Lane Group Flow (vph)	61	609	0	358	644	0	171	173	305	0	344	305
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		62			62			60			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		8	8	
Permitted Phases	6			2					4			8
Detector Phase	1	6		5	2		4	4	4	8	8	8
Switch Phase												

Lanes, Volumes, Timings
19: Oiler Drive & Pearland Parkway

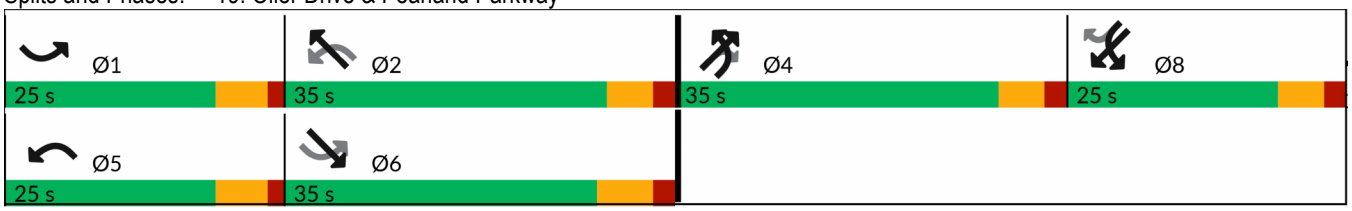
09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	15.0		5.0	20.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	35.0		25.0	35.0		35.0	35.0	35.0	25.0	25.0	25.0
Total Split (s)	25.0	35.0		25.0	35.0		35.0	35.0	35.0	25.0	25.0	25.0
Total Split (%)	20.8%	29.2%		20.8%	29.2%		29.2%	29.2%	29.2%	20.8%	20.8%	20.8%
Yellow Time (s)	4.5	5.0		4.5	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	2.0		1.5	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	7.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Max		None	None		None	None	None	None	None	None
Act Effct Green (s)	36.6	28.1		54.1	43.1		18.0	18.0	18.0		19.0	19.0
Actuated g/C Ratio	0.34	0.26		0.50	0.39		0.16	0.16	0.16		0.17	0.17
v/c Ratio	0.19	0.59		0.80	0.46		0.62	0.62	0.59		1.11	0.58
Control Delay (s/veh)	18.9	22.3		34.4	27.8		52.1	52.0	9.5		126.0	9.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	18.9	22.3		34.4	27.8		52.1	52.0	9.5		126.0	9.7
LOS	B	C		C	C		D	D	A		F	A
Approach Delay (s/veh)		22.0			30.2			32.0			71.4	
Approach LOS		C			C			C			E	
90th %ile Green (s)	9.9	28.0		19.0	38.1		26.8	26.8	26.8	19.0	19.0	19.0
90th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Max	Max	Max
70th %ile Green (s)	8.3	28.0		19.0	39.7		21.7	21.7	21.7	19.0	19.0	19.0
70th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Max	Max	Max
50th %ile Green (s)	7.4	28.0		19.0	40.6		18.0	18.0	18.0	19.0	19.0	19.0
50th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Max	Max	Max
30th %ile Green (s)	6.6	28.0		19.0	41.4		14.5	14.5	14.5	19.0	19.0	19.0
30th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Max	Max	Max
10th %ile Green (s)	0.0	28.0		19.0	54.0		10.1	10.1	10.1	19.0	19.0	19.0
10th %ile Term Code	Skip	MaxR		Max	Hold		Gap	Gap	Gap	Max	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 109.2
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay (s/veh): 37.7 Intersection LOS: D
Intersection Capacity Utilization 75.1% ICU Level of Service D
Analysis Period (min) 15
90th %ile Actuated Cycle: 117.8
70th %ile Actuated Cycle: 112.7
50th %ile Actuated Cycle: 109
30th %ile Actuated Cycle: 105.5
10th %ile Actuated Cycle: 101.1

Splits and Phases: 19: Oiler Drive & Pearland Parkway



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	515	86	139	1104	733	540
Future Volume (vph)	515	86	139	1104	733	540
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	250			150
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor						
Frt		0.850			0.936	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3313	0
Flt Permitted	0.950		0.117			
Satd. Flow (perm)	3433	1583	218	3539	3313	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		93			201	
Link Speed (mph)	30			30	30	
Link Distance (ft)	884			1122	1114	
Travel Time (s)	20.1			25.5	25.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	560	93	151	1200	797	587
Shared Lane Traffic (%)						
Lane Group Flow (vph)	560	93	151	1200	1384	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	54			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	6		7	4	8	
Permitted Phases		6	4			
Detector Phase	6	6	7	4	8	
Switch Phase						

Lanes, Volumes, Timings
20: Dixie Farm Road & Pearland Parkway

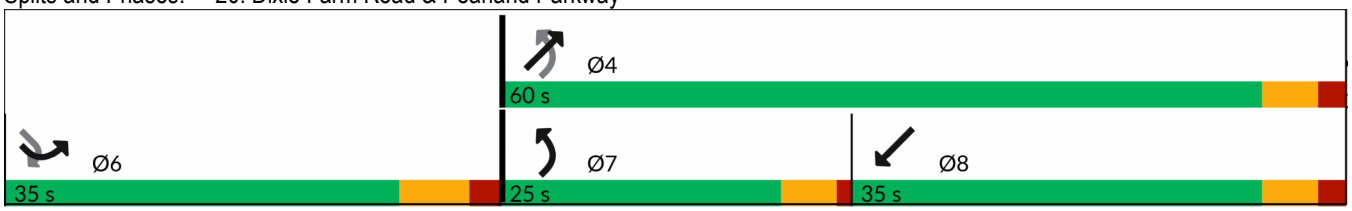
09/16/2024

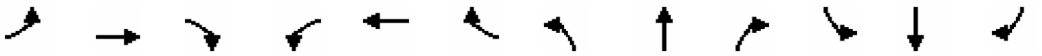
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Minimum Initial (s)	20.0	20.0	5.0	15.0	5.0	
Minimum Split (s)	35.0	35.0	25.0	35.0	35.0	
Total Split (s)	35.0	35.0	25.0	60.0	35.0	
Total Split (%)	36.8%	36.8%	26.3%	63.2%	36.8%	
Yellow Time (s)	5.0	5.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Max	Max	None	None	None	
Act Effct Green (s)	28.0	28.0	45.1	44.1	29.2	
Actuated g/C Ratio	0.33	0.33	0.53	0.52	0.34	
v/c Ratio	0.50	0.16	0.51	0.66	1.09	
Control Delay (s/veh)	25.0	5.7	17.7	17.0	79.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	25.0	5.7	17.7	17.0	79.4	
LOS	C	A	B	B	E	
Approach Delay (s/veh)	22.3			17.1	79.4	
Approach LOS	C			B	E	
90th %ile Green (s)	28.0	28.0	12.7	47.5	29.8	
90th %ile Term Code	MaxR	MaxR	Gap	Gap	Hold	
70th %ile Green (s)	28.0	28.0	10.8	44.8	29.0	
70th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
50th %ile Green (s)	28.0	28.0	10.0	44.0	29.0	
50th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
30th %ile Green (s)	28.0	28.0	8.9	42.9	29.0	
30th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
10th %ile Green (s)	28.0	28.0	7.2	41.2	29.0	
10th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 85.1
Natural Cycle: 95
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay (s/veh): 43.5 Intersection LOS: D
Intersection Capacity Utilization 76.9% ICU Level of Service D
Analysis Period (min) 15
90th %ile Actuated Cycle: 88.5
70th %ile Actuated Cycle: 85.8
50th %ile Actuated Cycle: 85
30th %ile Actuated Cycle: 83.9
10th %ile Actuated Cycle: 82.2

Splits and Phases: 20: Dixie Farm Road & Pearland Parkway





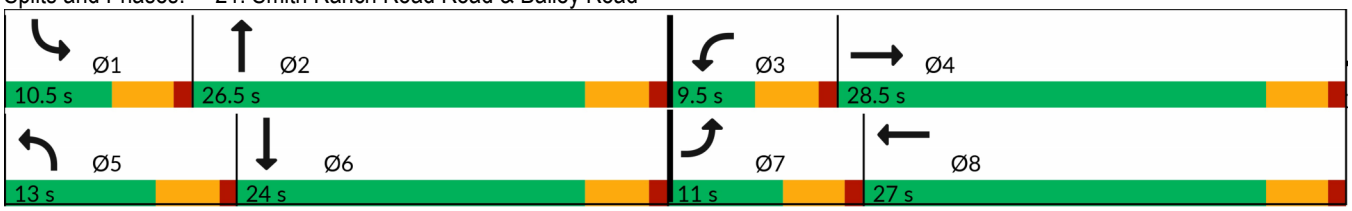
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	459	43	10	1251	44	187	24	10	58	15	163
Future Volume (vph)	135	459	43	10	1251	44	187	24	10	58	15	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	100		0	100		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.987			0.995			0.955			0.862	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3522	0	1770	3380	0	1770	3051	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3493	0	1770	3522	0	1770	3380	0	1770	3051	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			5			11			177	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		930			5111			1029			1098	
Travel Time (s)		21.1			116.2			23.4			25.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	147	499	47	11	1360	48	203	26	11	63	16	177
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	546	0	11	1408	0	203	37	0	63	193	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

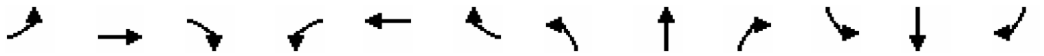
Lanes, Volumes, Timings
21: Smith Ranch Road Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	11.0	28.5		9.5	27.0		13.0	26.5		10.5	24.0	
Total Split (%)	14.7%	38.0%		12.7%	36.0%		17.3%	35.3%		14.0%	32.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	6.5	31.6		5.0	22.5		8.5	26.2		5.9	19.5	
Actuated g/C Ratio	0.09	0.42		0.07	0.30		0.11	0.35		0.08	0.26	
v/c Ratio	0.96	0.37		0.09	1.33		1.01	0.03		0.45	0.21	
Control Delay (s/veh)	101.9	16.1		34.8	180.3		104.9	14.8		44.0	5.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	101.9	16.1		34.8	180.3		104.9	14.8		44.0	5.4	
LOS	F	B		C	F		F	B		D	A	
Approach Delay (s/veh)		34.3			179.1			91.0			14.9	
Approach LOS		C			F			F			B	
90th %ile Green (s)	6.5	24.0		5.0	22.5		8.5	22.0		6.0	19.5	
90th %ile Term Code	Max	Hold		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	6.5	33.5		0.0	22.5		8.5	22.0		6.0	19.5	
70th %ile Term Code	Max	Hold		Skip	Max		Max	MaxR		Max	MaxR	
50th %ile Green (s)	6.5	33.5		0.0	22.5		8.5	22.0		6.0	19.5	
50th %ile Term Code	Max	Hold		Skip	Max		Max	MaxR		Max	MaxR	
30th %ile Green (s)	6.5	33.5		0.0	22.5		8.5	32.5		0.0	19.5	
30th %ile Term Code	Max	Hold		Skip	Max		Max	Hold		Skip	MaxR	
10th %ile Green (s)	6.5	33.5		0.0	22.5		8.5	32.5		0.0	19.5	
10th %ile Term Code	Max	Hold		Skip	Max		Max	Hold		Skip	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.33			
Intersection Signal Delay (s/veh): 116.4		Intersection LOS: F	
Intersection Capacity Utilization 74.5%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 75			
70th %ile Actuated Cycle: 75			
50th %ile Actuated Cycle: 75			
30th %ile Actuated Cycle: 75			
10th %ile Actuated Cycle: 75			

Splits and Phases: 21: Smith Ranch Road Road & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	534	4	4	878	112	6	0	4	80	1	117
Future Volume (vph)	108	534	4	4	878	112	6	0	4	80	1	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	40		0	350		0	80		150	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.983			0.850				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3536	0	1770	3479	0	1770	1583	0	1770	1863	1583
Flt Permitted	0.167			0.401			0.757			0.656		
Satd. Flow (perm)	311	3536	0	747	3479	0	1410	1583	0	1222	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			21			371				176
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5111			6249			1160			437	
Travel Time (s)		116.2			142.0			26.4			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	117	580	4	4	954	122	7	0	4	87	1	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	584	0	4	1076	0	7	4	0	87	1	127
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												

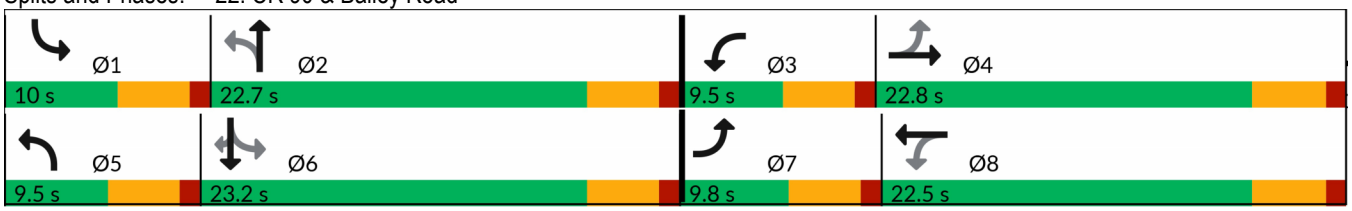
Lanes, Volumes, Timings
22: CR 90 & Bailey Road

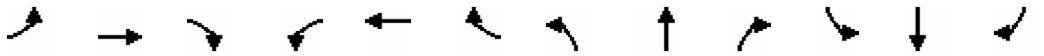
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	9.8	22.8		9.5	22.5		9.5	22.7		10.0	23.2	23.2
Total Split (%)	15.1%	35.1%		14.6%	34.6%		14.6%	34.9%		15.4%	35.7%	35.7%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max		None	Max	Max
Act Effct Green (s)	24.9	23.9		22.1	18.3		22.4	18.7		25.5	24.4	24.4
Actuated g/C Ratio	0.41	0.39		0.36	0.30		0.37	0.31		0.42	0.40	0.40
v/c Ratio	0.46	0.42		0.01	1.02		0.01	0.01		0.16	0.00	0.17
Control Delay (s/veh)	17.7	15.9		11.0	57.6		10.8	0.0		11.9	14.0	2.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	17.7	15.9		11.0	57.6		10.8	0.0		11.9	14.0	2.2
LOS	B	B		B	E		B	A		B	B	A
Approach Delay (s/veh)		16.2			57.5			6.9			6.1	
Approach LOS		B			E			A			A	
90th %ile Green (s)	5.3	18.3		5.0	18.0		5.0	18.2		5.5	18.7	18.7
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	MaxR
70th %ile Green (s)	5.3	27.8		0.0	18.0		0.0	18.2		5.5	28.2	28.2
70th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
50th %ile Green (s)	5.3	27.8		0.0	18.0		0.0	18.2		5.5	28.2	28.2
50th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
30th %ile Green (s)	5.3	27.8		0.0	18.0		0.0	18.2		5.5	28.2	28.2
30th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
10th %ile Green (s)	0.0	18.0		0.0	18.0		0.0	18.7		0.0	18.7	18.7
10th %ile Term Code	Skip	Hold		Skip	Max		Skip	Hold		Skip	MaxR	MaxR

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 61.1			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay (s/veh): 37.3		Intersection LOS: D	
Intersection Capacity Utilization 56.2%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 65			
50th %ile Actuated Cycle: 65			
30th %ile Actuated Cycle: 65			
10th %ile Actuated Cycle: 45.7			

Splits and Phases: 22: CR 90 & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	592	31	40	786	123	37	75	73	73	49	64
Future Volume (vph)	71	592	31	40	786	123	37	75	73	73	49	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	300		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.992			0.980			0.926			0.915	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3511	0	1770	3468	0	1770	1725	0	1770	1704	0
Flt Permitted	0.136			0.340			0.678			0.564		
Satd. Flow (perm)	253	3511	0	633	3468	0	1263	1725	0	1051	1704	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			12			30			41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		6249			5290			1720			1280	
Travel Time (s)		142.0			120.2			39.1			29.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	77	643	34	43	854	134	40	82	79	79	53	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	677	0	43	988	0	40	161	0	79	123	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
23: Cullen Parkway & Bailey Road

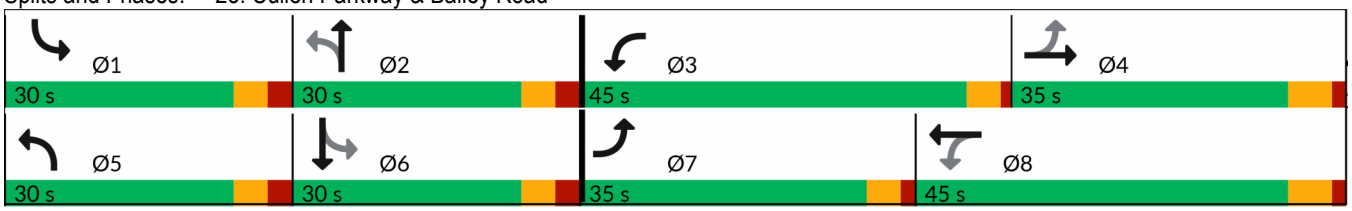
09/16/2024

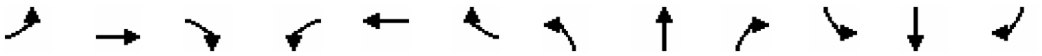
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	30.0		40.0	40.0		20.0	24.0		25.0	25.0	
Total Split (s)	35.0	35.0		45.0	45.0		30.0	30.0		30.0	30.0	
Total Split (%)	25.0%	25.0%		32.1%	32.1%		21.4%	21.4%		21.4%	21.4%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.0	1.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		4.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	48.7	42.4		45.2	38.4		30.2	24.7		33.6	28.3	
Actuated g/C Ratio	0.50	0.44		0.47	0.40		0.31	0.25		0.35	0.29	
v/c Ratio	0.30	0.44		0.11	0.72		0.09	0.35		0.19	0.23	
Control Delay (s/veh)	15.9	21.9		13.3	30.0		22.0	29.9		22.8	22.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.9	21.9		13.3	30.0		22.0	29.9		22.8	22.6	
LOS	B	C		B	C		C	C		C	C	
Approach Delay (s/veh)		21.2			29.3			28.3			22.7	
Approach LOS		C			C			C			C	
90th %ile Green (s)	10.9	42.3		8.1	39.0		8.7	24.0		11.0	26.3	
90th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	9.4	41.7		7.2	39.0		7.6	24.0		9.4	25.8	
70th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	8.4	41.2		6.7	39.0		6.9	24.0		8.4	25.5	
50th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	7.9	51.9		0.0	39.0		0.0	24.0		7.5	37.5	
30th %ile Term Code	Gap	Hold		Skip	Max		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	33.1		0.0	33.1		0.0	24.0		0.0	24.0	
10th %ile Term Code	Skip	Hold		Skip	Gap		Skip	MaxR		Skip	MaxR	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 97.2
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay (s/veh): 25.8 Intersection LOS: C
Intersection Capacity Utilization 61.3% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 107.9
70th %ile Actuated Cycle: 104.8
50th %ile Actuated Cycle: 102.8
30th %ile Actuated Cycle: 101.4
10th %ile Actuated Cycle: 69.1

Splits and Phases: 23: Cullen Parkway & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	524	70	145	622	221	187	385	212	238	256	207
Future Volume (vph)	195	524	70	145	622	221	187	385	212	238	256	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	220		0	330		330	300		300
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.982			0.961				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3401	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.081			0.303			0.495			0.178		
Satd. Flow (perm)	151	3476	0	564	3401	0	922	1863	1583	332	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			23				180			225
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		5290			5252			1738			1472	
Travel Time (s)		80.2			79.6			21.5			18.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	212	570	76	158	676	240	203	418	230	259	278	225
Shared Lane Traffic (%)												
Lane Group Flow (vph)	212	646	0	158	916	0	203	418	230	259	278	225
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												

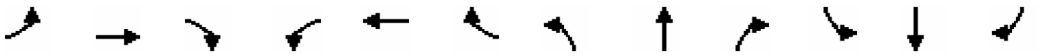
Lanes, Volumes, Timings
24: Manvel Road Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	50.0	50.0		50.0	50.0		50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	71.4	51.0		59.7	44.3		62.1	44.3	44.3	72.4	50.3	50.3
Actuated g/C Ratio	0.46	0.33		0.39	0.29		0.40	0.29	0.29	0.47	0.33	0.33
v/c Ratio	0.73	0.56		0.48	0.93		0.44	0.78	0.40	0.71	0.46	0.34
Control Delay (s/veh)	53.7	45.8		31.3	68.0		28.6	63.8	14.2	37.4	45.7	6.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.7	45.8		31.3	68.0		28.6	63.8	14.2	37.4	45.7	6.1
LOS	D	D		C	E		C	E	B	D	D	A
Approach Delay (s/veh)		47.7			62.6			42.0			31.2	
Approach LOS		D			E			D			C	
90th %ile Green (s)	30.2	52.1		22.1	44.0		23.4	44.0	44.0	34.2	54.8	54.8
90th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR	MaxR	Gap	Hold	Hold
70th %ile Green (s)	24.5	51.8		16.7	44.0		19.3	44.0	44.0	27.0	51.7	51.7
70th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR	MaxR	Gap	Hold	Hold
50th %ile Green (s)	21.0	51.5		13.5	44.0		16.7	44.0	44.0	22.6	49.9	49.9
50th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR	MaxR	Gap	Hold	Hold
30th %ile Green (s)	17.8	50.1		11.7	44.0		14.3	44.0	44.0	18.7	48.4	48.4
30th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR	MaxR	Gap	Hold	Hold
10th %ile Green (s)	13.9	48.5		9.4	44.0		11.4	44.0	44.0	13.7	46.3	46.3
10th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR	MaxR	Gap	Hold	Hold

Intersection Summary			
Area Type:	Other		
Cycle Length: 200			
Actuated Cycle Length: 154.7			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay (s/veh): 47.3		Intersection LOS: D	
Intersection Capacity Utilization 86.8%		ICU Level of Service E	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 174.4			
70th %ile Actuated Cycle: 161.5			
50th %ile Actuated Cycle: 153.6			
30th %ile Actuated Cycle: 146.5			
10th %ile Actuated Cycle: 137.6			

Splits and Phases: 24: Manvel Road Road & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	841	12	12	787	181	41	59	25	192	25	133
Future Volume (vph)	124	841	12	12	787	181	41	59	25	192	25	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.998			0.972			0.955			0.874	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3532	0	1770	3440	0	1770	1779	0	1770	1628	0
Flt Permitted	0.076			0.211			0.649			0.628		
Satd. Flow (perm)	142	3532	0	393	3440	0	1209	1779	0	1170	1628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			13			10			124	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5252			5253			1557			1503	
Travel Time (s)		119.4			119.4			35.4			34.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	135	914	13	13	855	197	45	64	27	209	27	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	135	927	0	13	1052	0	45	91	0	209	172	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
25: Harkey Road & Bailey Road

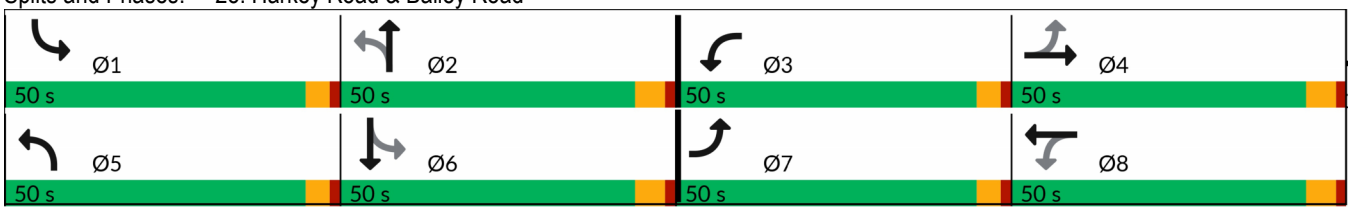
09/16/2024

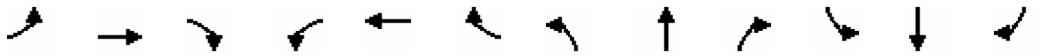
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	50.0	50.0		50.0	50.0		50.0	50.0		50.0	50.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	25.0%		25.0%	25.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	63.6	58.1		51.2	44.1		52.6	44.1		65.6	54.4	
Actuated g/C Ratio	0.46	0.42		0.37	0.32		0.38	0.32		0.47	0.39	
v/c Ratio	0.61	0.63		0.06	0.96		0.09	0.16		0.34	0.24	
Control Delay (s/veh)	40.1	35.7		23.1	65.0		21.8	32.9		24.1	10.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	40.1	35.7		23.1	65.0		21.8	32.9		24.1	10.6	
LOS	D	D		C	E		C	C		C	B	
Approach Delay (s/veh)		36.2			64.5			29.2			18.0	
Approach LOS		D			E			C			B	
90th %ile Green (s)	18.7	55.7		7.0	44.0		9.5	44.0		21.1	55.6	
90th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	14.7	52.3		6.4	44.0		8.3	44.0		17.5	53.2	
70th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	13.6	62.6		0.0	44.0		7.5	44.0		15.3	51.8	
50th %ile Term Code	Gap	Hold		Skip	Max		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	11.6	60.6		0.0	44.0		6.7	44.0		13.4	50.7	
30th %ile Term Code	Gap	Hold		Skip	Max		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	9.2	58.2		0.0	44.0		0.0	44.0		10.9	59.9	
10th %ile Term Code	Gap	Hold		Skip	Max		Skip	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 200
Actuated Cycle Length: 139.2
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay (s/veh): 44.6 Intersection LOS: D
Intersection Capacity Utilization 71.7% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 149.8
70th %ile Actuated Cycle: 142.2
50th %ile Actuated Cycle: 138.9
30th %ile Actuated Cycle: 135
10th %ile Actuated Cycle: 130.1

Splits and Phases: 25: Harkey Road & Bailey Road





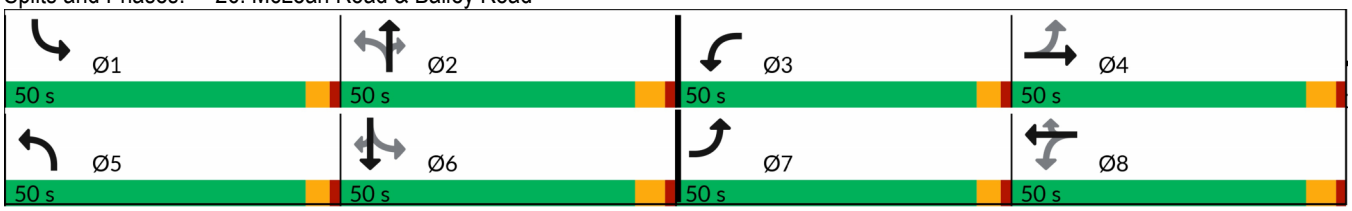
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	990	18	28	819	144	16	4	31	129	15	185
Future Volume (vph)	111	990	18	28	819	144	16	4	31	129	15	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	330		0	330		330	150		0	150		150
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.997	0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3529	0	1770	3380	1441	1770	1863	1583	1770	1863	1583
Flt Permitted	0.099			0.109			0.747			0.683		
Satd. Flow (perm)	184	3529	0	203	3380	1441	1391	1863	1583	1272	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			1	96			71			201
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5253			2652			1736			1108	
Travel Time (s)		119.4			60.3			39.5			25.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	121	1076	20	30	890	157	17	4	34	140	16	201
Shared Lane Traffic (%)						10%						
Lane Group Flow (vph)	121	1096	0	30	906	141	17	4	34	140	16	201
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												

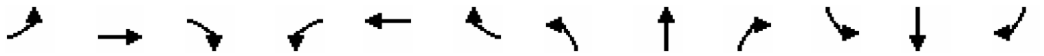
Lanes, Volumes, Timings
26: McLean Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	50.0	50.0		50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	25.0%	25.0%		25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	61.7	53.6		51.8	44.1	44.1	51.3	44.1	44.1	61.9	56.3	56.3
Actuated g/C Ratio	0.46	0.40		0.39	0.33	0.33	0.38	0.33	0.33	0.46	0.42	0.42
v/c Ratio	0.54	0.78		0.19	0.81	0.26	0.03	0.01	0.06	0.22	0.02	0.26
Control Delay (s/veh)	30.9	40.7		23.6	48.5	13.7	20.8	32.5	0.4	22.3	26.3	4.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.9	40.7		23.6	48.5	13.7	20.8	32.5	0.4	22.3	26.3	4.6
LOS	C	D		C	D	B	C	C	A	C	C	A
Approach Delay (s/veh)		39.7			43.3			9.0			12.5	
Approach LOS		D			D			A			B	
90th %ile Green (s)	15.9	51.8		8.1	44.0	44.0	7.3	44.0	44.0	15.7	52.4	52.4
90th %ile Term Code	Gap	Hold		Gap	Max	Max	Gap	MaxR	MaxR	Gap	Hold	Hold
70th %ile Green (s)	13.0	49.8		7.2	44.0	44.0	6.6	44.0	44.0	13.2	50.6	50.6
70th %ile Term Code	Gap	Hold		Gap	Max	Max	Gap	MaxR	MaxR	Gap	Hold	Hold
50th %ile Green (s)	11.3	48.6		6.7	44.0	44.0	0.0	44.0	44.0	11.7	60.7	60.7
50th %ile Term Code	Gap	Hold		Gap	Max	Max	Skip	MaxR	MaxR	Gap	Hold	Hold
30th %ile Green (s)	10.5	59.5		0.0	44.0	44.0	0.0	44.0	44.0	10.3	59.3	59.3
30th %ile Term Code	Gap	Hold		Skip	Max	Max	Skip	MaxR	MaxR	Gap	Hold	Hold
10th %ile Green (s)	8.4	57.4		0.0	44.0	44.0	0.0	44.0	44.0	8.5	57.5	57.5
10th %ile Term Code	Gap	Hold		Skip	Max	Max	Skip	MaxR	MaxR	Gap	Hold	Hold

Intersection Summary			
Area Type:	Other		
Cycle Length: 200			
Actuated Cycle Length: 133.7			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay (s/veh): 36.9		Intersection LOS: D	
Intersection Capacity Utilization 61.8%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 141.6			
70th %ile Actuated Cycle: 136.2			
50th %ile Actuated Cycle: 133			
30th %ile Actuated Cycle: 130.8			
10th %ile Actuated Cycle: 126.9			

Splits and Phases: 26: McLean Road & Bailey Road





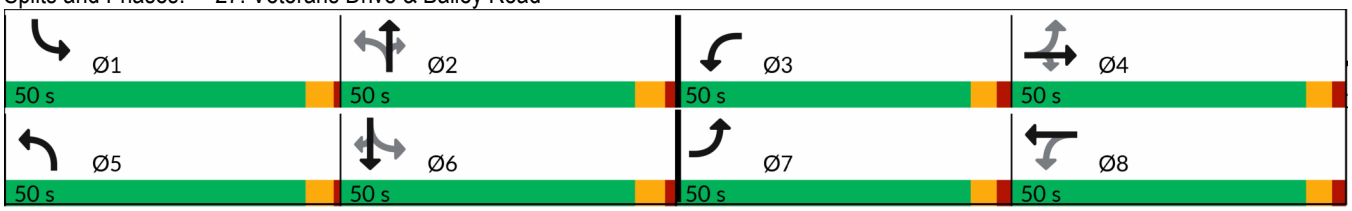
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	779	38	70	573	77	98	207	182	115	81	265
Future Volume (vph)	89	779	38	70	573	77	98	207	182	115	81	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		180	150		150	180		180	250		180
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.982				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3476	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.225			0.093			0.700			0.520		
Satd. Flow (perm)	419	1863	1583	173	3476	0	1304	1863	1583	969	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			76		7				167			288
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2652			5774			5367			662	
Travel Time (s)		60.3			131.2			122.0			15.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	97	847	41	76	623	84	107	225	198	125	88	288
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	847	41	76	707	0	107	225	198	125	88	288
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												

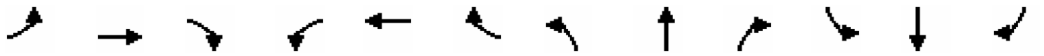
Lanes, Volumes, Timings
27: Veterans Drive & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	12.0	12.0	3.0	12.0		3.0	10.0	10.0	3.0	12.0	12.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0		50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%		25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.5	4.5	4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	54.0	44.0	44.0	51.5	42.8		55.4	44.0	44.0	56.7	44.7	44.7
Actuated g/C Ratio	0.41	0.34	0.34	0.39	0.33		0.42	0.34	0.34	0.43	0.34	0.34
v/c Ratio	0.35	1.35	0.07	0.44	0.62		0.18	0.36	0.31	0.26	0.14	0.39
Control Delay (s/veh)	25.2	203.7	1.3	29.7	40.2		21.0	35.4	8.7	21.8	31.4	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.2	203.7	1.3	29.7	40.2		21.0	35.4	8.7	21.8	31.4	5.2
LOS	C	F	A	C	D		C	D	A	C	C	A
Approach Delay (s/veh)		177.7			39.1			22.5			13.9	
Approach LOS		F			D			C			B	
90th %ile Green (s)	13.2	44.0	44.0	11.1	41.9		13.6	44.0	44.0	14.4	44.8	44.8
90th %ile Term Code	Gap	Max	Max	Gap	Hold		Gap	MaxR	MaxR	Gap	Hold	Hold
70th %ile Green (s)	11.1	44.0	44.0	9.6	42.5		11.5	44.0	44.0	12.2	44.7	44.7
70th %ile Term Code	Gap	Max	Max	Gap	Hold		Gap	MaxR	MaxR	Gap	Hold	Hold
50th %ile Green (s)	9.9	44.0	44.0	8.7	42.8		10.2	44.0	44.0	10.9	44.7	44.7
50th %ile Term Code	Gap	Max	Max	Gap	Hold		Gap	MaxR	MaxR	Gap	Hold	Hold
30th %ile Green (s)	8.7	44.0	44.0	7.8	43.1		9.0	44.0	44.0	9.6	44.6	44.6
30th %ile Term Code	Gap	Max	Max	Gap	Hold		Gap	MaxR	MaxR	Gap	Hold	Hold
10th %ile Green (s)	7.2	44.0	44.0	6.6	43.4		7.5	44.0	44.0	8.0	44.5	44.5
10th %ile Term Code	Gap	Max	Max	Gap	Hold		Gap	MaxR	MaxR	Gap	Hold	Hold

Intersection Summary			
Area Type:	Other		
Cycle Length: 200			
Actuated Cycle Length: 130.8			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.35			
Intersection Signal Delay (s/veh): 80.2		Intersection LOS: F	
Intersection Capacity Utilization 81.3%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 136.5			
70th %ile Actuated Cycle: 132.8			
50th %ile Actuated Cycle: 130.6			
30th %ile Actuated Cycle: 128.4			
10th %ile Actuated Cycle: 125.6			

Splits and Phases: 27: Veterans Drive & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	469	43	247	631	145	160	81	333	189	75	71
Future Volume (vph)	50	469	43	247	631	145	160	81	333	189	75	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	400		150	220		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.987			0.972			0.879			0.927	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3440	0	1770	3111	0	1770	3281	0
Flt Permitted	0.189			0.198			0.651			0.404		
Satd. Flow (perm)	352	3493	0	369	3440	0	1213	3111	0	753	3281	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			17			362			77	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2764			1396			1102			1362	
Travel Time (s)		62.8			31.7			25.0			31.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	54	510	47	268	686	158	174	88	362	205	82	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	557	0	268	844	0	174	450	0	205	159	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
28: Old Alvin Rd & McHard Road

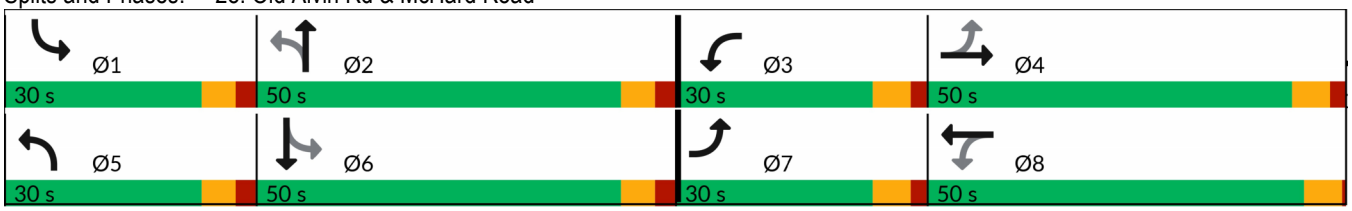
09/16/2024

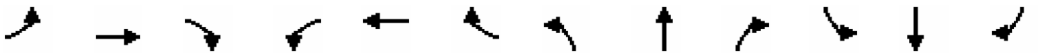
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	20.0	35.0		20.0	35.0		20.0	22.5		20.0	22.5	
Total Split (s)	30.0	50.0		30.0	50.0		30.0	50.0		30.0	50.0	
Total Split (%)	18.8%	31.3%		18.8%	31.3%		18.8%	31.3%		18.8%	31.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	0.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	5.0		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	34.9	26.8		52.2	42.0		57.4	44.0		60.1	45.4	
Actuated g/C Ratio	0.27	0.21		0.40	0.32		0.44	0.34		0.46	0.35	
v/c Ratio	0.30	0.77		0.77	0.76		0.30	0.35		0.44	0.13	
Control Delay (s/veh)	30.1	56.8		42.9	44.8		21.6	8.7		23.5	17.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	30.1	56.8		42.9	44.8		21.6	8.7		23.5	17.6	
LOS	C	E		D	D		C	A		C	B	
Approach Delay (s/veh)		54.4			44.4			12.3			21.0	
Approach LOS		D			D			B			C	
90th %ile Green (s)	10.5	36.8		23.5	51.3		19.1	43.5		21.3	45.7	
90th %ile Term Code	Gap	Gap		Max	Hold		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	9.0	30.6		22.4	45.5		15.5	43.5		17.1	45.1	
70th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	8.1	26.8		19.3	39.5		13.4	43.5		14.8	44.9	
50th %ile Term Code	Gap	Gap		Gap	Gap		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	7.2	23.5		16.6	34.4		11.4	43.5		12.5	44.6	
30th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	18.3		13.0	39.3		8.6	43.5		9.3	44.2	
10th %ile Term Code	Skip	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 160
Actuated Cycle Length: 130.7
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay (s/veh): 36.1 Intersection LOS: D
Intersection Capacity Utilization 73.2% ICU Level of Service D
Analysis Period (min) 15
90th %ile Actuated Cycle: 151.1
70th %ile Actuated Cycle: 139.6
50th %ile Actuated Cycle: 130.4
30th %ile Actuated Cycle: 122.1
10th %ile Actuated Cycle: 110.1

Splits and Phases: 28: Old Alvin Rd & McHard Road





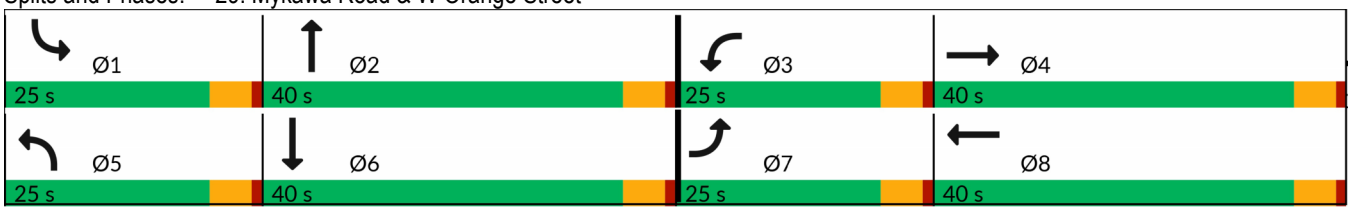
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	244	12	13	118	155	10	469	16	52	225	102
Future Volume (vph)	164	244	12	13	118	155	10	469	16	52	225	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	80		0	80		0	0		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.993			0.915			0.995			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1850	0	1770	1704	0	1770	1853	0	1770	3373	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1850	0	1770	1704	0	1770	1853	0	1770	3373	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			50			1			55	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		647			2722			1670			4209	
Travel Time (s)		14.7			61.9			38.0			95.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	178	265	13	14	128	168	11	510	17	57	245	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	178	278	0	14	296	0	11	527	0	57	356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

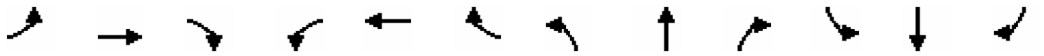
Lanes, Volumes, Timings
29: Mykawa Road & W Orange Street 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (%)	19.2%	30.8%		19.2%	30.8%		19.2%	30.8%		19.2%	30.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	14.8	35.7		6.5	20.0		6.4	36.2		8.8	45.0	
Actuated g/C Ratio	0.15	0.37		0.07	0.21		0.07	0.37		0.09	0.46	
v/c Ratio	0.66	0.41		0.12	0.76		0.10	0.77		0.36	0.22	
Control Delay (s/veh)	53.9	26.7		51.5	44.5		51.5	39.7		52.7	16.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	53.9	26.7		51.5	44.5		51.5	39.7		52.7	16.1	
LOS	D	C		D	D		D	D		D	B	
Approach Delay (s/veh)		37.3			44.8			40.0			21.1	
Approach LOS		D			D			D			C	
90th %ile Green (s)	20.0	42.8		8.0	30.8		7.6	35.0		12.6	40.0	
90th %ile Term Code	Max	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	18.5	36.1		6.9	24.5		0.0	35.0		10.2	50.2	
70th %ile Term Code	Gap	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
50th %ile Green (s)	15.4	40.6		0.0	20.2		0.0	35.0		8.7	48.7	
50th %ile Term Code	Gap	Hold		Skip	Gap		Skip	MaxR		Gap	Hold	
30th %ile Green (s)	12.7	34.1		0.0	16.4		0.0	35.0		7.3	47.3	
30th %ile Term Code	Gap	Hold		Skip	Gap		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	8.9	24.8		0.0	10.9		0.0	35.0		0.0	35.0	
10th %ile Term Code	Gap	Hold		Skip	Gap		Skip	MaxR		Skip	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 97.4			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 35.6		Intersection LOS: D	
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 118.4			
70th %ile Actuated Cycle: 108.2			
50th %ile Actuated Cycle: 99.3			
30th %ile Actuated Cycle: 91.4			
10th %ile Actuated Cycle: 69.8			

Splits and Phases: 29: Mykawa Road & W Orange Street





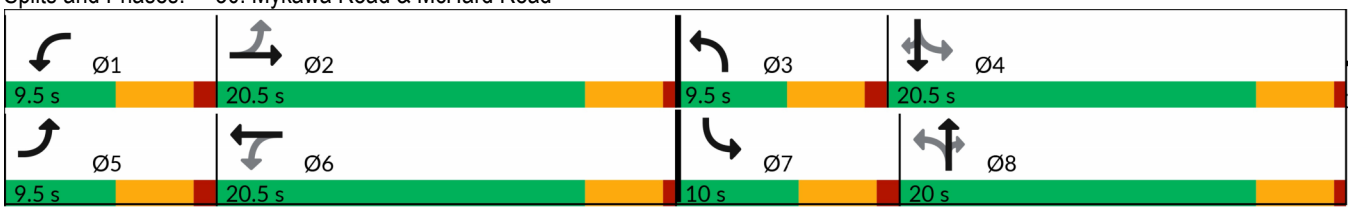
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	796	36	203	570	237	43	508	163	274	315	31
Future Volume (vph)	104	796	36	203	570	237	43	508	163	274	315	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	180		150	150		0	180		40
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.994			0.956				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	1770	3383	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.230			0.217			0.448			0.197		
Satd. Flow (perm)	428	3518	0	404	3383	0	835	1863	1583	367	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			105				182			182
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1932			1570			4209			883	
Travel Time (s)		43.9			35.7			71.7			15.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	113	865	39	221	620	258	47	552	177	298	342	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	904	0	221	878	0	47	552	177	298	342	34
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	5	2		1	6		3	8	8	7	4	4
Switch Phase												

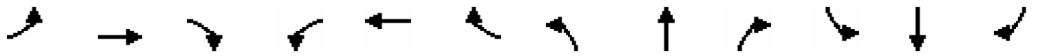
Lanes, Volumes, Timings
30: Mykawa Road & McHard Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0	4.0	5.0	4.0	4.0
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0	20.0	9.5	20.0	20.0
Total Split (s)	9.5	20.5		9.5	20.5		9.5	20.0	20.0	10.0	20.5	20.5
Total Split (%)	15.8%	34.2%		15.8%	34.2%		15.8%	33.3%	33.3%	16.7%	34.2%	34.2%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5	0.5	1.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0	4.0	4.5	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max		None	None		None	Max	Max	None	None	None
Act Effct Green (s)	21.0	16.5		21.9	18.4		20.5	16.0	16.0	23.1	20.3	20.3
Actuated g/C Ratio	0.35	0.28		0.37	0.31		0.34	0.27	0.27	0.39	0.34	0.34
v/c Ratio	0.43	0.93		0.85	0.79		0.13	1.11	0.32	1.10	0.54	0.05
Control Delay (s/veh)	16.3	39.5		45.7	24.7		11.4	100.6	5.0	107.4	21.9	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.3	39.5		45.7	24.7		11.4	100.6	5.0	107.4	21.9	0.2
LOS	B	D		D	C		B	F	A	F	C	A
Approach Delay (s/veh)		36.9			28.9			73.4			58.6	
Approach LOS		D			C			E			E	
90th %ile Green (s)	5.0	16.5		5.0	16.5		5.0	16.0	16.0	5.5	16.5	16.5
90th %ile Term Code	Max	MaxR		Max	Max		Max	MaxR	MaxR	Max	Max	Max
70th %ile Green (s)	5.0	16.5		5.0	16.5		5.0	16.0	16.0	5.5	16.5	16.5
70th %ile Term Code	Max	MaxR		Max	Max		Max	MaxR	MaxR	Max	Max	Max
50th %ile Green (s)	5.0	16.5		5.0	16.5		5.0	16.0	16.0	5.5	16.5	16.5
50th %ile Term Code	Max	MaxR		Max	Max		Max	MaxR	MaxR	Max	Hold	Hold
30th %ile Green (s)	5.0	16.5		5.0	16.5		0.0	16.0	16.0	5.5	26.0	26.0
30th %ile Term Code	Max	MaxR		Max	Max		Skip	MaxR	MaxR	Max	Hold	Hold
10th %ile Green (s)	0.0	16.5		5.0	26.0		0.0	16.0	16.0	5.5	26.0	26.0
10th %ile Term Code	Skip	MaxR		Max	Hold		Skip	MaxR	MaxR	Max	Hold	Hold

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay (s/veh): 46.5		Intersection LOS: D	
Intersection Capacity Utilization 90.5%		ICU Level of Service E	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 60			
70th %ile Actuated Cycle: 60			
50th %ile Actuated Cycle: 60			
30th %ile Actuated Cycle: 60			
10th %ile Actuated Cycle: 60			

Splits and Phases: 30: Mykawa Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	648	56	101	487	44	68	41	154	98	64	15
Future Volume (vph)	6	648	56	101	487	44	68	41	154	98	64	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		0	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988			0.988			0.882			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3497	0	1770	1643	0	1770	1811	0
Flt Permitted	0.411			0.192			0.701			0.541		
Satd. Flow (perm)	766	3497	0	358	3497	0	1306	1643	0	1008	1811	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			16			167			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2112			2249			716			526	
Travel Time (s)		48.0			51.1			16.3			12.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	7	704	61	110	529	48	74	45	167	107	70	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	765	0	110	577	0	74	212	0	107	86	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
31: Hatfield Road & McHard Road

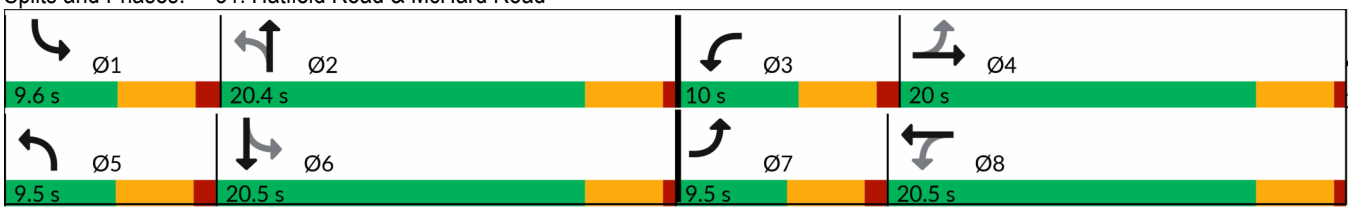
09/16/2024

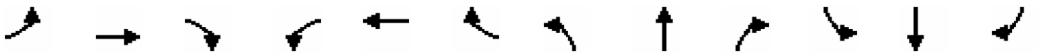
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		10.0	20.5		9.5	20.4		9.6	20.5	
Total Split (%)	15.8%	33.3%		16.7%	34.2%		15.8%	34.0%		16.0%	34.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	18.4	15.2		21.3	20.8		20.3	17.1		21.2	18.9	
Actuated g/C Ratio	0.33	0.28		0.39	0.38		0.37	0.31		0.38	0.34	
v/c Ratio	0.02	0.78		0.39	0.43		0.14	0.34		0.23	0.14	
Control Delay (s/veh)	10.3	26.6		14.9	14.5		11.4	7.3		12.2	14.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.3	26.6		14.9	14.5		11.4	7.3		12.2	14.4	
LOS	B	C		B	B		B	A		B	B	
Approach Delay (s/veh)		26.5			14.6			8.3			13.2	
Approach LOS		C			B			A			B	
90th %ile Green (s)	5.0	16.0		5.5	16.5		5.0	16.4		5.1	16.5	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	0.0	16.0		5.5	26.0		5.0	16.4		5.1	16.5	
70th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Hold	
50th %ile Green (s)	0.0	16.0		5.5	26.0		5.0	16.4		5.1	16.5	
50th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Hold	
30th %ile Green (s)	0.0	16.0		5.5	26.0		0.0	16.4		5.1	26.0	
30th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Max	Hold	
10th %ile Green (s)	0.0	11.2		0.0	11.2		0.0	16.4		0.0	16.4	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 55.1
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay (s/veh): 18.3 Intersection LOS: B
Intersection Capacity Utilization 56.1% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 60
70th %ile Actuated Cycle: 60
50th %ile Actuated Cycle: 60
30th %ile Actuated Cycle: 60
10th %ile Actuated Cycle: 35.6

Splits and Phases: 31: Hatfield Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	469	40	56	462	25	158	37	167	67	115	129
Future Volume (vph)	15	469	40	56	462	25	158	37	167	67	115	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988			0.992			0.877			0.921	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3511	0	1770	1634	0	1770	1716	0
Flt Permitted	0.411			0.293			0.454			0.620		
Satd. Flow (perm)	766	3497	0	546	3511	0	846	1634	0	1155	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			9			182			93	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2019			2112			892			740	
Travel Time (s)		45.9			48.0			20.3			16.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	16	510	43	61	502	27	172	40	182	73	125	140
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	553	0	61	529	0	172	222	0	73	265	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
32: Oday Road & McHard Road

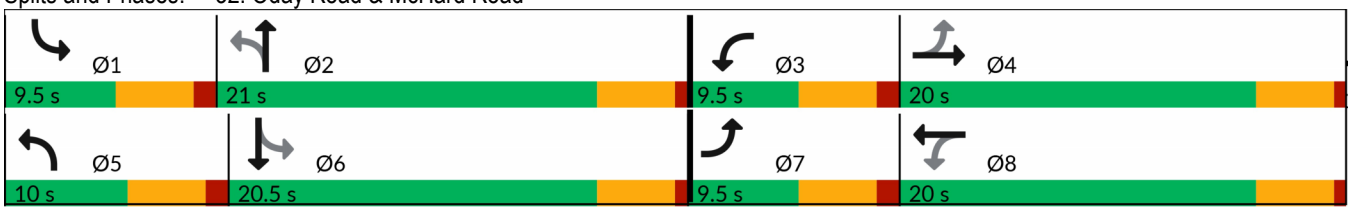
09/16/2024

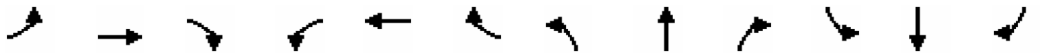
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		9.5	20.0		10.0	21.0		9.5	20.5	
Total Split (%)	15.8%	33.3%		15.8%	33.3%		16.7%	35.0%		15.8%	34.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	14.9	12.9		16.4	16.1		20.7	18.5		18.8	15.5	
Actuated g/C Ratio	0.30	0.26		0.33	0.33		0.42	0.37		0.38	0.31	
v/c Ratio	0.05	0.60		0.19	0.46		0.37	0.31		0.14	0.44	
Control Delay (s/veh)	10.9	20.0		12.3	15.2		12.9	6.4		10.7	14.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.9	20.0		12.3	15.2		12.9	6.4		10.7	14.1	
LOS	B	B		B	B		B	A		B	B	
Approach Delay (s/veh)		19.7			14.9			9.2			13.4	
Approach LOS		B			B			A			B	
90th %ile Green (s)	5.0	16.0		5.0	16.0		5.5	17.0		5.0	16.5	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Max	
70th %ile Green (s)	0.0	16.0		5.0	25.5		5.5	17.0		5.0	16.5	
70th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Hold	
50th %ile Green (s)	0.0	15.0		5.0	24.5		5.5	17.0		5.0	16.5	
50th %ile Term Code	Skip	Gap		Max	Hold		Max	MaxR		Max	Hold	
30th %ile Green (s)	0.0	9.7		0.0	9.7		5.5	17.7		0.0	7.7	
30th %ile Term Code	Skip	Gap		Skip	Hold		Max	Hold		Skip	Gap	
10th %ile Green (s)	0.0	8.1		0.0	8.1		0.0	17.0		0.0	17.0	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 49.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay (s/veh): 14.9 Intersection LOS: B
Intersection Capacity Utilization 55.3% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 60
70th %ile Actuated Cycle: 60
50th %ile Actuated Cycle: 59
30th %ile Actuated Cycle: 35.4
10th %ile Actuated Cycle: 33.1

Splits and Phases: 32: Oday Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	477	38	73	525	118	62	129	58	7	19	24
Future Volume (vph)	132	477	38	73	525	118	62	129	58	7	19	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.989			0.973			0.953			0.917	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3500	0	1770	3444	0	1770	1775	0	1770	1708	0
Flt Permitted	0.225			0.365			0.672			0.630		
Satd. Flow (perm)	419	3500	0	680	3444	0	1252	1775	0	1174	1708	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			39			36			26	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2021			2019			1010			1120	
Travel Time (s)		45.9			45.9			23.0			25.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	143	518	41	79	571	128	67	140	63	8	21	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	143	559	0	79	699	0	67	203	0	8	47	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
33: Garden Road & McHard Road

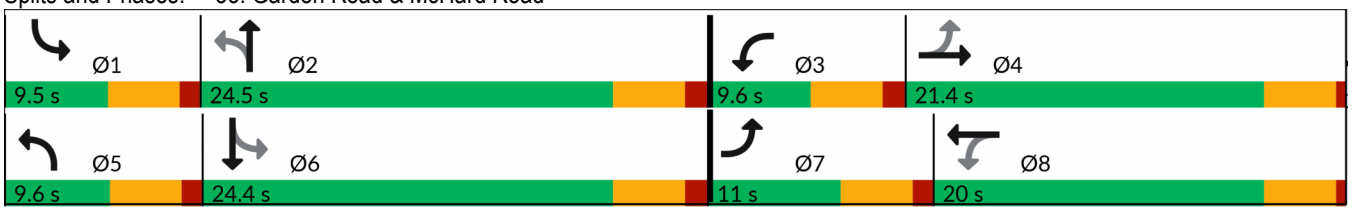
09/16/2024

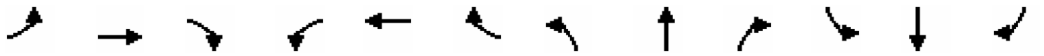
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	11.0	21.4		9.6	20.0		9.6	24.5		9.5	24.4	
Total Split (%)	16.9%	32.9%		14.8%	30.8%		14.8%	37.7%		14.6%	37.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	20.7	17.8		18.0	14.7		25.1	24.2		23.4	20.8	
Actuated g/C Ratio	0.36	0.31		0.31	0.26		0.44	0.42		0.41	0.36	
v/c Ratio	0.47	0.51		0.25	0.77		0.11	0.27		0.02	0.07	
Control Delay (s/veh)	17.5	19.7		14.1	27.2		10.9	12.4		10.0	10.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	17.5	19.7		14.1	27.2		10.9	12.4		10.0	10.3	
LOS	B	B		B	C		B	B		A	B	
Approach Delay (s/veh)		19.3			25.8			12.0			10.2	
Approach LOS		B			C			B			B	
90th %ile Green (s)	6.5	17.4		5.1	16.0		5.1	20.0		5.0	19.9	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	6.5	17.4		5.1	16.0		5.1	29.5		0.0	19.9	
70th %ile Term Code	Max	Max		Max	Max		Max	Hold		Skip	MaxR	
50th %ile Green (s)	6.5	17.4		5.1	16.0		5.1	29.5		0.0	19.9	
50th %ile Term Code	Max	Hold		Max	Max		Max	Hold		Skip	MaxR	
30th %ile Green (s)	6.5	26.1		0.0	15.1		0.0	20.0		0.0	20.0	
30th %ile Term Code	Max	Hold		Skip	Gap		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	10.1		0.0	10.1		0.0	20.0		0.0	20.0	
10th %ile Term Code	Skip	Hold		Skip	Gap		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 57.6
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay (s/veh): 20.7 Intersection LOS: C
Intersection Capacity Utilization 46.7% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 65
70th %ile Actuated Cycle: 65
50th %ile Actuated Cycle: 65
30th %ile Actuated Cycle: 54.6
10th %ile Actuated Cycle: 38.6

Splits and Phases: 33: Garden Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	518	33	77	549	4	38	10	92	12	7	9
Future Volume (vph)	9	518	33	77	549	4	38	10	92	12	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		150	100		0	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.991			0.999			0.865			0.917	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3507	0	1770	3536	0	1770	1611	0	1770	1708	0
Flt Permitted	0.350			0.278			0.718			0.685		
Satd. Flow (perm)	652	3507	0	518	3536	0	1337	1611	0	1276	1708	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1			100			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1957			2021			616			706	
Travel Time (s)		44.5			45.9			14.0			16.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	10	563	36	84	597	4	41	11	100	13	8	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	599	0	84	601	0	41	111	0	13	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
34: Roy Road & McHard Road

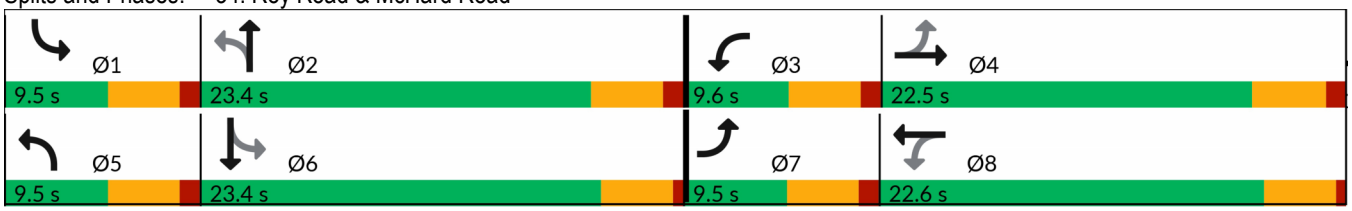
09/16/2024

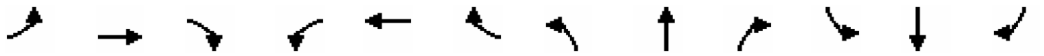
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	5.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	22.5		9.5	20.0	
Total Split (s)	9.5	22.5		9.6	22.6		9.5	23.4		9.5	23.4	
Total Split (%)	14.6%	34.6%		14.8%	34.8%		14.6%	36.0%		14.6%	36.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	1.0		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.5		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	17.1	14.5		18.8	18.5		22.3	21.5		21.6	20.5	
Actuated g/C Ratio	0.33	0.28		0.36	0.36		0.43	0.41		0.42	0.39	
v/c Ratio	0.03	0.61		0.27	0.48		0.07	0.15		0.02	0.03	
Control Delay (s/veh)	10.8	20.3		12.9	15.3		10.9	5.4		10.8	11.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.8	20.3		12.9	15.3		10.9	5.4		10.8	11.6	
LOS	B	C		B	B		B	A		B	B	
Approach Delay (s/veh)		20.1			15.0			6.9			11.2	
Approach LOS		C			B			A			B	
90th %ile Green (s)	5.0	18.0		5.1	18.6		5.0	18.9		5.0	19.4	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	0.0	18.0		5.1	28.1		5.0	28.4		0.0	19.4	
70th %ile Term Code	Skip	Max		Max	Hold		Max	Hold		Skip	MaxR	
50th %ile Green (s)	0.0	14.6		5.1	24.7		0.0	18.9		0.0	19.4	
50th %ile Term Code	Skip	Gap		Max	Hold		Skip	MaxR		Skip	MaxR	
30th %ile Green (s)	0.0	13.0		0.0	13.5		0.0	18.9		0.0	19.4	
30th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	MaxR	
10th %ile Green (s)	0.0	8.9		0.0	9.4		0.0	18.9		0.0	19.4	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	MaxR	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 52
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay (s/veh): 16.2 Intersection LOS: B
Intersection Capacity Utilization 39.7% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 65
70th %ile Actuated Cycle: 65
50th %ile Actuated Cycle: 52.1
30th %ile Actuated Cycle: 40.9
10th %ile Actuated Cycle: 36.8

Splits and Phases: 34: Roy Road & McHard Road





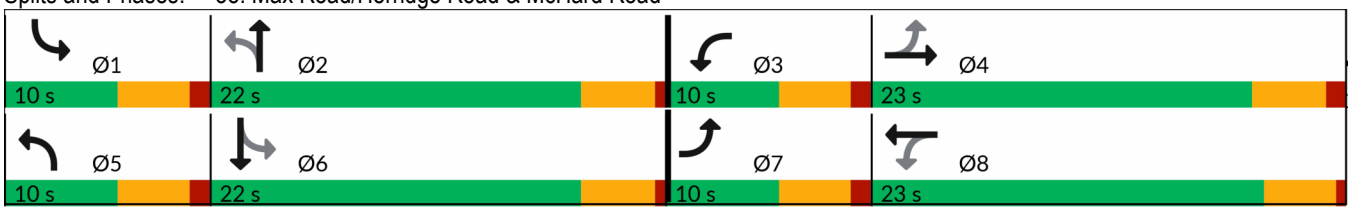
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	447	58	67	528	9	81	28	93	13	10	16
Future Volume (vph)	1	447	58	67	528	9	81	28	93	13	10	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	120		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.983			0.997			0.884			0.909	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3529	0	1770	1647	0	1770	1693	0
Flt Permitted	0.384			0.312			0.543			0.673		
Satd. Flow (perm)	715	3479	0	581	3529	0	1011	1647	0	1254	1693	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			3			101			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2239			1957			302			796	
Travel Time (s)		50.9			44.5			6.9			18.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	486	63	73	574	10	88	30	101	14	11	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	549	0	73	584	0	88	131	0	14	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

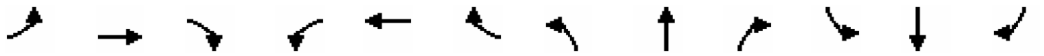
Lanes, Volumes, Timings
35: Max Road/Herridge Road & McHard Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	10.0	23.0		10.0	23.0		10.0	22.0		10.0	22.0	
Total Split (%)	15.4%	35.4%		15.4%	35.4%		15.4%	33.8%		15.4%	33.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	16.0	13.2		17.7	17.4		19.3	19.0		14.8	14.5	
Actuated g/C Ratio	0.33	0.28		0.37	0.36		0.40	0.40		0.31	0.30	
v/c Ratio	0.00	0.56		0.20	0.45		0.15	0.18		0.03	0.05	
Control Delay (s/veh)	9.0	17.7		10.5	13.5		12.0	6.7		15.9	12.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.0	17.7		10.5	13.5		12.0	6.7		15.9	12.7	
LOS	A	B		B	B		B	A		B	B	
Approach Delay (s/veh)		17.7			13.2			8.8			13.8	
Approach LOS		B			B			A			B	
90th %ile Green (s)	5.5	18.5		5.5	19.0		5.5	18.0		5.5	18.0	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	0.0	16.0		5.5	26.5		17.5	18.0		0.0	0.0	
70th %ile Term Code	Skip	Gap		Max	Hold		Hold	MaxR		Skip	Skip	
50th %ile Green (s)	0.0	13.5		5.5	24.0		17.5	18.0		0.0	0.0	
50th %ile Term Code	Skip	Gap		Max	Hold		Hold	MaxR		Skip	Skip	
30th %ile Green (s)	0.0	10.5		0.0	11.0		0.0	18.0		0.0	18.0	
30th %ile Term Code	Skip	Hold		Skip	Gap		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	8.2		0.0	8.7		0.0	18.0		0.0	18.0	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 47.8			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay (s/veh): 14.3		Intersection LOS: B	
Intersection Capacity Utilization 40.6%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 52.5			
50th %ile Actuated Cycle: 50			
30th %ile Actuated Cycle: 37			
10th %ile Actuated Cycle: 34.7			

Splits and Phases: 35: Max Road/Herridge Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	337	237	84	403	327	216	1192	56	155	682	184
Future Volume (vph)	219	337	237	84	403	327	216	1192	56	155	682	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	120		0	300		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.938			0.933			0.993			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3320	0	1770	3302	0	1770	3514	0	1770	3426	0
Flt Permitted	0.099			0.371			0.099			0.110		
Satd. Flow (perm)	184	3320	0	691	3302	0	184	3514	0	205	3426	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		110			127			2			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		283			3590			1925			1330	
Travel Time (s)		6.4			81.6			43.8			30.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	238	366	258	91	438	355	235	1296	61	168	741	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	238	624	0	91	793	0	235	1357	0	168	941	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

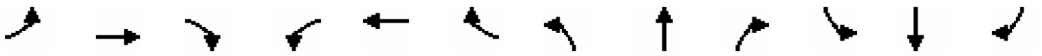
Lanes, Volumes, Timings
36: Cullen Boulevard & McHard Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	7.0		3.0	7.0		3.0	5.0		5.0	3.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	23.5		20.0	23.5	
Total Split (s)	30.0	65.0		30.0	65.0		35.0	45.0		35.0	30.0	
Total Split (%)	17.1%	37.1%		17.1%	37.1%		20.0%	25.7%		20.0%	17.1%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.0		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	60.3	45.3		44.1	34.6		58.9	40.3		51.1	36.4	
Actuated g/C Ratio	0.45	0.34		0.33	0.26		0.44	0.30		0.39	0.27	
v/c Ratio	0.75	0.52		0.30	0.83		0.77	1.27		0.67	0.99	
Control Delay (s/veh)	48.1	29.8		24.5	47.1		51.2	167.6		44.6	74.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	48.1	29.8		24.5	47.1		51.2	167.6		44.6	74.2	
LOS	D	C		C	D		D	F		D	E	
Approach Delay (s/veh)		34.9			44.8			150.4			69.7	
Approach LOS		C			D			F			E	
90th %ile Green (s)	24.0	61.3		12.7	49.5		29.5	39.5		23.6	33.6	
90th %ile Term Code	Max	Hold		Gap	Gap		Max	MaxR		Gap	Hold	
70th %ile Green (s)	24.0	53.9		10.6	40.0		22.7	39.5		18.1	34.9	
70th %ile Term Code	Max	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	20.5	46.2		9.3	34.5		18.3	39.5		14.4	35.6	
50th %ile Term Code	Gap	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	17.2	38.7		8.2	29.2		14.5	39.5		11.1	36.1	
30th %ile Term Code	Gap	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	13.1	29.7		6.8	22.9		10.9	39.5		8.7	37.3	
10th %ile Term Code	Gap	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 175			
Actuated Cycle Length: 132.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay (s/veh): 86.9		Intersection LOS: F	
Intersection Capacity Utilization 96.3%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 159.6			
70th %ile Actuated Cycle: 144.6			
50th %ile Actuated Cycle: 131.9			
30th %ile Actuated Cycle: 120			
10th %ile Actuated Cycle: 107.2			

Splits and Phases: 36: Cullen Boulevard & McHard Road



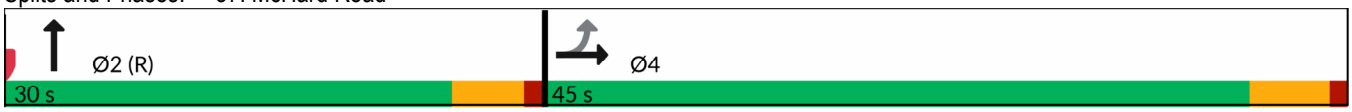


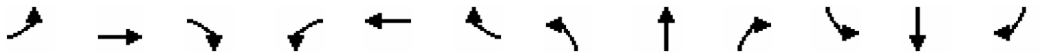
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	753	0	0	0	0	0	61	44	0	0	0
Future Volume (vph)	52	753	0	0	0	0	0	61	44	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.937				
Flt Protected	0.950											
Satd. Flow (prot)	1770	3539	0	0	0	0	0	3316	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	3539	0	0	0	0	0	3316	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	57							48				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		553			824			256			481	
Travel Time (s)		12.6			18.7			5.8			10.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	57	818	0	0	0	0	0	66	48	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	818	0	0	0	0	0	114	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2				
Detector Template	Left	Thru						Thru				
Leading Detector (ft)	20	100						100				
Trailing Detector (ft)	0	0						0				
Turn Type	Perm	NA						NA				
Protected Phases		4						2				
Permitted Phases	4											
Detector Phase	4	4						2				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	20.0	20.0						10.0				
Minimum Split (s)	35.0	35.0						25.0				
Total Split (s)	45.0	45.0						30.0				
Total Split (%)	60.0%	60.0%						40.0%				
Yellow Time (s)	4.5	4.5						4.0				
All-Red Time (s)	1.0	1.0						1.0				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	5.5	5.5						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None						C-Max				
Act Effct Green (s)	26.1	26.1						38.4				
Actuated g/C Ratio	0.35	0.35						0.51				
v/c Ratio	0.09	0.66						0.07				
Control Delay (s/veh)	4.3	23.0						7.3				
Queue Delay	0.0	0.0						0.0				
Total Delay (s/veh)	4.3	23.0						7.3				
LOS	A	C						A				
Approach Delay (s/veh)		21.8						7.3				
Approach LOS		C						A				
90th %ile Green (s)	33.5	33.5						31.0				
90th %ile Term Code	Gap	Gap						Coord				
70th %ile Green (s)	29.4	29.4						35.1				
70th %ile Term Code	Gap	Gap						Coord				
50th %ile Green (s)	25.7	25.7						38.8				
50th %ile Term Code	Gap	Gap						Coord				
30th %ile Green (s)	22.0	22.0						42.5				
30th %ile Term Code	Gap	Gap						Coord				
10th %ile Green (s)	20.0	20.0						44.5				
10th %ile Term Code	Min	Min						Coord				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 20.1		Intersection LOS: C	
Intersection Capacity Utilization 64.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 37: McHard Road



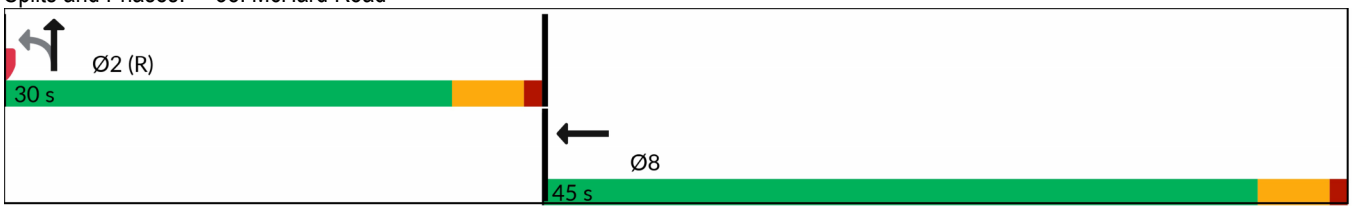


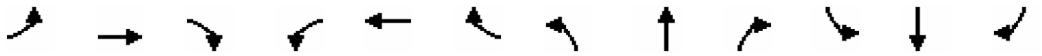
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	816	44	84	62	0	0	0	0
Future Volume (vph)	0	0	0	0	816	44	84	62	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.992							
Flt Protected								0.972				
Satd. Flow (prot)	0	0	0	0	3511	0	0	3440	0	0	0	0
Flt Permitted								0.972				
Satd. Flow (perm)	0	0	0	0	3511	0	0	3440	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					11			91				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			3717			481			228	
Travel Time (s)		14.8			84.5			10.9			5.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	887	48	91	67	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	935	0	0	158	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Turn Type					NA		Perm	NA				
Protected Phases					8			2				
Permitted Phases							2					
Detector Phase					8		2	2				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)					20.0		10.0	10.0				
Minimum Split (s)					35.0		25.0	25.0				
Total Split (s)					45.0		30.0	30.0				
Total Split (%)					60.0%		40.0%	40.0%				
Yellow Time (s)					4.0		4.0	4.0				
All-Red Time (s)					1.0		1.0	1.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode					None		C-Max	C-Max				
Act Effct Green (s)					28.7			36.3				
Actuated g/C Ratio					0.38			0.48				
v/c Ratio					0.69			0.09				
Control Delay (s/veh)					21.5			5.4				
Queue Delay					0.0			0.0				
Total Delay (s/veh)					21.5			5.4				
LOS					C			A				
Approach Delay (s/veh)					21.5			5.4				
Approach LOS					C			A				
90th %ile Green (s)					36.1		28.9	28.9				
90th %ile Term Code					Gap		Coord	Coord				
70th %ile Green (s)					32.0		33.0	33.0				
70th %ile Term Code					Gap		Coord	Coord				
50th %ile Green (s)					29.0		36.0	36.0				
50th %ile Term Code					Gap		Coord	Coord				
30th %ile Green (s)					25.8		39.2	39.2				
30th %ile Term Code					Gap		Coord	Coord				
10th %ile Green (s)					20.6		44.4	44.4				
10th %ile Term Code					Gap		Coord	Coord				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 19.2		Intersection LOS: B	
Intersection Capacity Utilization 40.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 38: McHard Road



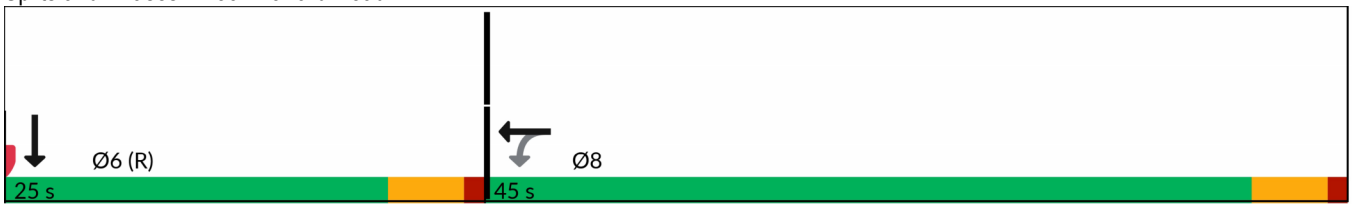


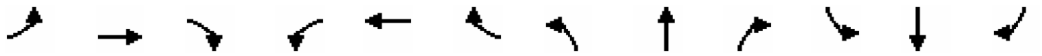
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	37	869	0	0	0	0	0	95	141
Future Volume (vph)	0	0	0	37	869	0	0	0	0	0	95	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt											0.910	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1770	3539	0	0	0	0	0	3221	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1770	3539	0	0	0	0	0	3221	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)				40							123	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1629			651			450			272	
Travel Time (s)		37.0			14.8			10.2			6.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	40	945	0	0	0	0	0	103	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	40	945	0	0	0	0	0	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2						2	
Detector Template				Left	Thru						Thru	
Leading Detector (ft)				20	100						100	
Trailing Detector (ft)				0	0						0	
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Detector Phase				8	8						6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				20.0	20.0						10.0	
Minimum Split (s)				35.0	35.0						23.0	
Total Split (s)				45.0	45.0						25.0	
Total Split (%)				64.3%	64.3%						35.7%	
Yellow Time (s)				4.0	4.0						4.0	
All-Red Time (s)				1.0	1.0						1.0	
Lost Time Adjust (s)				0.0	0.0						0.0	
Total Lost Time (s)				5.0	5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				None	None						C-Max	
Act Effct Green (s)				28.1	28.1						31.9	
Actuated g/C Ratio				0.40	0.40						0.46	
v/c Ratio				0.05	0.67						0.17	
Control Delay (s/veh)				3.6	19.0						7.5	
Queue Delay				0.0	0.0						0.0	
Total Delay (s/veh)				3.6	19.0						7.5	
LOS				A	B						A	
Approach Delay (s/veh)					18.4						7.5	
Approach LOS					B						A	
90th %ile Green (s)				36.1	36.1						23.9	
90th %ile Term Code				Gap	Gap						Coord	
70th %ile Green (s)				31.6	31.6						28.4	
70th %ile Term Code				Gap	Gap						Coord	
50th %ile Green (s)				28.1	28.1						31.9	
50th %ile Term Code				Gap	Gap						Coord	
30th %ile Green (s)				24.5	24.5						35.5	
30th %ile Term Code				Gap	Gap						Coord	
10th %ile Green (s)				20.0	20.0						40.0	
10th %ile Term Code				Min	Min						Coord	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 16.1		Intersection LOS: B	
Intersection Capacity Utilization 40.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 39: McHard Road



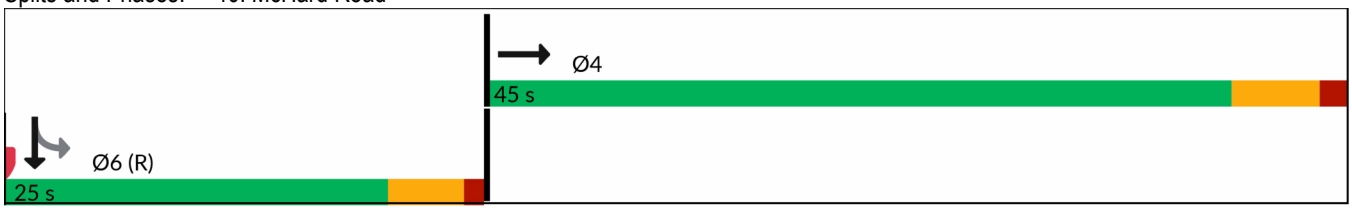


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	702	55	0	0	0	0	0	0	102	27	0
Future Volume (vph)	0	702	55	0	0	0	0	0	0	102	27	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor												
Frt		0.989										
Flt Protected											0.962	
Satd. Flow (prot)	0	3500	0	0	0	0	0	0	0	0	3405	0
Flt Permitted											0.962	
Satd. Flow (perm)	0	3500	0	0	0	0	0	0	0	0	3405	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		19									111	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1663			553			168			450	
Travel Time (s)		37.8			12.6			3.8			10.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	763	60	0	0	0	0	0	0	111	29	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	823	0	0	0	0	0	0	0	0	140	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2								1	2	
Detector Template		Thru								Left	Thru	
Leading Detector (ft)		100								20	100	
Trailing Detector (ft)		0								0	0	
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Detector Phase		4								6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		20.0								10.0	10.0	
Minimum Split (s)		35.0								23.0	23.0	
Total Split (s)		45.0								25.0	25.0	
Total Split (%)		64.3%								35.7%	35.7%	
Yellow Time (s)		4.5								4.0	4.0	
All-Red Time (s)		1.5								1.0	1.0	
Lost Time Adjust (s)		0.0									0.0	
Total Lost Time (s)		6.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None								C-Max	C-Max	
Act Effct Green (s)		24.7									34.3	
Actuated g/C Ratio		0.35									0.49	
v/c Ratio		0.66									0.08	
Control Delay (s/veh)		20.8									2.3	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		20.8									2.3	
LOS		C									A	
Approach Delay (s/veh)		20.8									2.3	
Approach LOS		C									A	
90th %ile Green (s)		31.3								27.7	27.7	
90th %ile Term Code		Gap								Coord	Coord	
70th %ile Green (s)		27.6								31.4	31.4	
70th %ile Term Code		Gap								Coord	Coord	
50th %ile Green (s)		24.2								34.8	34.8	
50th %ile Term Code		Gap								Coord	Coord	
30th %ile Green (s)		20.6								38.4	38.4	
30th %ile Term Code		Gap								Coord	Coord	
10th %ile Green (s)		20.0								39.0	39.0	
10th %ile Term Code		Min								Coord	Coord	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 18.2		Intersection LOS: B	
Intersection Capacity Utilization 38.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 40: McHard Road



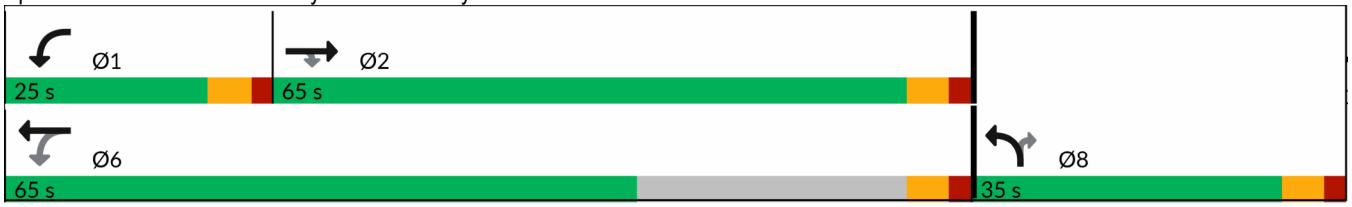
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1236	898	173	1020	321	152
Future Volume (vph)	1236	898	173	1020	321	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	120		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	0.91	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.975	0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3305	1441	1770	3539	1770	1583
Flt Permitted			0.061		0.950	
Satd. Flow (perm)	3305	1441	114	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	24	686				165
Link Speed (mph)	30			30	30	
Link Distance (ft)	975			186	512	
Travel Time (s)	22.2			4.2	11.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1343	976	188	1109	349	165
Shared Lane Traffic (%)		28%				
Lane Group Flow (vph)	1616	703	188	1109	349	165
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						

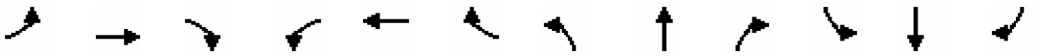
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	20.0	20.0	3.0	20.0	5.0	5.0
Minimum Split (s)	65.0	65.0	20.0	45.0	25.0	25.0
Total Split (s)	65.0	65.0	25.0	65.0	35.0	35.0
Total Split (%)	52.0%	52.0%	20.0%	52.0%	28.0%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Max	Max
Act Effct Green (s)	59.1	59.1	78.4	78.4	29.0	29.0
Actuated g/C Ratio	0.49	0.49	0.66	0.66	0.24	0.24
v/c Ratio	0.98	0.66	0.73	0.48	0.81	0.32
Control Delay (s/veh)	48.2	5.2	42.4	11.0	59.3	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.2	5.2	42.4	11.0	59.3	7.6
LOS	D	A	D	B	E	A
Approach Delay (s/veh)	35.1			15.6	42.7	
Approach LOS	D			B	D	
90th %ile Green (s)	59.0	59.0	19.0	84.0	29.0	29.0
90th %ile Term Code	Max	Max	Max	Hold	MaxR	MaxR
70th %ile Green (s)	59.0	59.0	16.4	81.4	29.0	29.0
70th %ile Term Code	Max	Max	Gap	Hold	MaxR	MaxR
50th %ile Green (s)	59.0	59.0	13.4	78.4	29.0	29.0
50th %ile Term Code	Max	Max	Gap	Hold	MaxR	MaxR
30th %ile Green (s)	59.0	59.0	10.6	75.6	29.0	29.0
30th %ile Term Code	Max	Max	Gap	Hold	MaxR	MaxR
10th %ile Green (s)	59.0	59.0	7.7	72.7	29.0	29.0
10th %ile Term Code	Max	Max	Gap	Hold	MaxR	MaxR

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 119.4
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay (s/veh): 29.9 Intersection LOS: C
Intersection Capacity Utilization 86.1% ICU Level of Service E
Analysis Period (min) 15
90th %ile Actuated Cycle: 125
70th %ile Actuated Cycle: 122.4
50th %ile Actuated Cycle: 119.4
30th %ile Actuated Cycle: 116.6
10th %ile Actuated Cycle: 113.7

Splits and Phases: 41: County Place Parkway & McHard Road



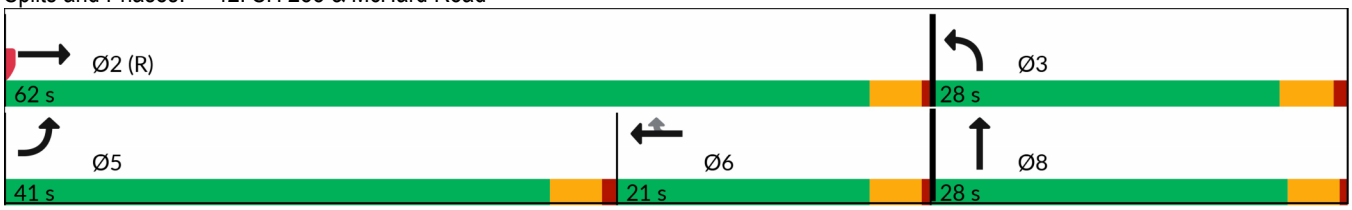


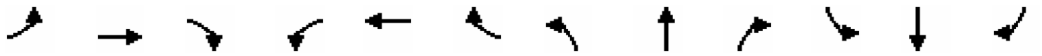
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	789	938	0	0	708	490	795	311	150	0	0	0
Future Volume (vph)	789	938	0	0	708	490	795	311	150	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850		0.951				
Flt Protected	0.950	0.990					0.950					
Satd. Flow (prot)	1610	3356	0	0	5085	1583	1770	3366	0	0	0	0
Flt Permitted	0.950	0.537					0.950					
Satd. Flow (perm)	1610	1821	0	0	5085	1583	1770	3366	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121		88				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		505			975			278			566	
Travel Time (s)		11.5			22.2			6.3			12.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	858	1020	0	0	770	533	864	338	163	0	0	0
Shared Lane Traffic (%)	29%											
Lane Group Flow (vph)	609	1269	0	0	770	533	864	501	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Turn Type	Prot	NA			NA	Perm	Prot	NA				
Protected Phases	5	2			6		3	8				
Permitted Phases						6						
Detector Phase	5	2			6	6	3	8				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0			4.0	4.0	5.0	4.0				
Minimum Split (s)	9.5	20.0			20.0	20.0	9.5	20.0				
Total Split (s)	41.0	62.0			21.0	21.0	28.0	28.0				
Total Split (%)	45.6%	68.9%			23.3%	23.3%	31.1%	31.1%				
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5				
All-Red Time (s)	1.0	0.5			0.5	0.5	1.0	0.5				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	4.0			4.0	4.0	4.5	4.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	None	C-Max			None	None	None	Max				
Act Effct Green (s)	35.7	58.0			17.8	17.8	23.5	24.0				
Actuated g/C Ratio	0.40	0.64			0.20	0.20	0.26	0.27				
v/c Ratio	0.96	0.94			0.77	1.30	1.87	0.52				
Control Delay (s/veh)	36.5	26.7			40.3	178.0	424.2	25.2				
Queue Delay	0.0	0.7			0.0	0.0	0.2	0.0				
Total Delay (s/veh)	36.5	27.4			40.3	178.0	424.4	25.2				
LOS	D	C			D	F	F	C				
Approach Delay (s/veh)		30.3			96.6			277.9				
Approach LOS		C			F			F				
90th %ile Green (s)	36.5	58.0			17.0	17.0	23.5	24.0				
90th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
70th %ile Green (s)	36.5	58.0			17.0	17.0	23.5	24.0				
70th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
50th %ile Green (s)	36.5	58.0			17.0	17.0	23.5	24.0				
50th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
30th %ile Green (s)	36.5	58.0			17.0	17.0	23.5	24.0				
30th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
10th %ile Green (s)	32.4	58.0			21.1	21.1	23.5	24.0				
10th %ile Term Code	Gap	Coord			Coord	Coord	Max	MaxR				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.87			
Intersection Signal Delay (s/veh): 123.7		Intersection LOS: F	
Intersection Capacity Utilization 83.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 42: SH 288 & McHard Road



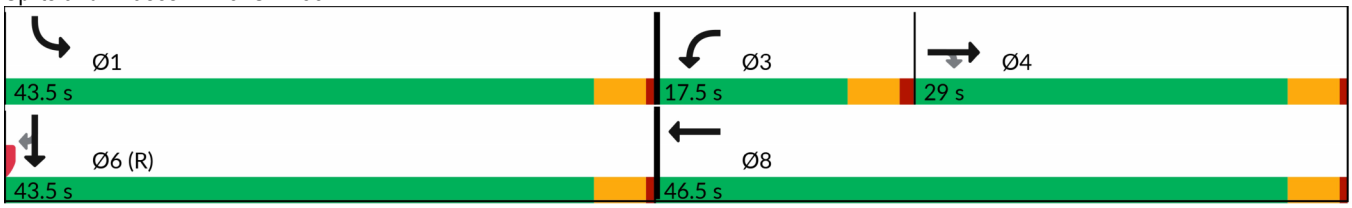


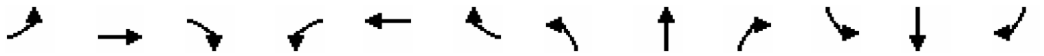
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱	↰	↑↑					↰	↑↑	↱
Traffic Volume (vph)	0	1261	414	222	1314	0	0	0	0	456	318	650
Future Volume (vph)	0	1261	414	222	1314	0	0	0	0	456	318	650
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			326									67
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		807			505			209			785	
Travel Time (s)		18.3			11.5			4.8			17.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1371	450	241	1428	0	0	0	0	496	346	707
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1371	450	241	1428	0	0	0	0	496	346	707
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Detector Phase		4	4	3	8					1	6	6
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	5.0	4.0					4.0	4.0	4.0
Minimum Split (s)		20.0	20.0	9.5	20.0					20.0	20.0	20.0
Total Split (s)		29.0	29.0	17.5	46.5					43.5	43.5	43.5
Total Split (%)		32.2%	32.2%	19.4%	51.7%					48.3%	48.3%	48.3%
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		0.5	0.5	1.0	0.5					0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0	4.5	4.0					4.0	4.0	4.0
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		None	None	None	None					Max	C-Max	C-Max
Act Effct Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
Actuated g/C Ratio		0.28	0.28	0.14	0.47					0.44	0.44	0.44
v/c Ratio		0.97	0.67	0.95	0.85					0.64	0.22	0.97
Control Delay (s/veh)		51.0	13.6	61.1	13.8					24.4	16.2	50.0
Queue Delay		0.0	0.0	0.0	4.2					1.0	0.0	0.0
Total Delay (s/veh)		51.0	13.6	61.1	18.0					25.3	16.2	50.0
LOS		D	B	E	B					C	B	D
Approach Delay (s/veh)		41.8			24.2						34.5	
Approach LOS		D			C						C	
90th %ile Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
90th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
70th %ile Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
70th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
50th %ile Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
50th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
30th %ile Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
30th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
10th %ile Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
10th %ile Term Code		Max	Max	Max	Hold					Coord	Coord	Coord

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 33.7		Intersection LOS: C	
Intersection Capacity Utilization 83.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 43: SH 288





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	787	124	169	453	108	182	232	358	120	127	74
Future Volume (vph)	62	787	124	169	453	108	182	232	358	120	127	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	220		150	120		150	80		80
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.980			0.971			0.909				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3437	0	1770	1693	0	1770	1863	1583
Flt Permitted	0.396			0.088			0.605			0.144		
Satd. Flow (perm)	738	3468	0	164	3437	0	1127	1693	0	268	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			25			52				170
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3334			4203			1951			5273	
Travel Time (s)		75.8			95.5			44.3			119.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	67	855	135	184	492	117	198	252	389	130	138	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	990	0	184	609	0	198	641	0	130	138	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												

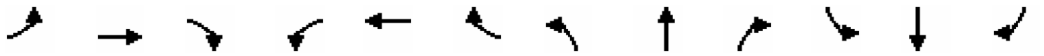
Lanes, Volumes, Timings
44: Veterans Drive & Magnoila Parkway 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	7.0		3.0	7.0		10.0	5.0		10.0	5.0	5.0
Minimum Split (s)	20.0	45.0		35.0	40.0		20.0	25.0		20.0	25.0	25.0
Total Split (s)	20.0	45.0		35.0	60.0		20.0	35.0		20.0	35.0	35.0
Total Split (%)	14.8%	33.3%		25.9%	44.4%		14.8%	25.9%		14.8%	25.9%	25.9%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max		None	None	None
Act Effct Green (s)	46.2	38.4		57.4	46.7		41.9	29.1		39.3	27.8	27.8
Actuated g/C Ratio	0.40	0.33		0.49	0.40		0.36	0.25		0.34	0.24	0.24
v/c Ratio	0.19	0.86		0.69	0.44		0.42	1.39		0.55	0.31	0.16
Control Delay (s/veh)	17.5	45.5		37.8	26.3		27.8	221.0		33.3	40.4	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	17.5	45.5		37.8	26.3		27.8	221.0		33.3	40.4	0.7
LOS	B	D		D	C		C	F		C	D	A
Approach Delay (s/veh)		43.7			29.0			175.4			28.6	
Approach LOS		D			C			F			C	
90th %ile Green (s)	9.9	39.0		20.1	49.2		14.0	29.0		14.0	29.0	29.0
90th %ile Term Code	Gap	Max		Gap	Hold		Max	MaxR		Max	Hold	Hold
70th %ile Green (s)	8.7	39.0		16.0	46.3		14.0	29.0		12.7	27.7	27.7
70th %ile Term Code	Gap	Max		Gap	Hold		Max	MaxR		Gap	Hold	Hold
50th %ile Green (s)	7.8	39.0		13.2	44.4		14.0	29.0		11.0	26.0	26.0
50th %ile Term Code	Gap	Max		Gap	Hold		Max	MaxR		Gap	Hold	Hold
30th %ile Green (s)	7.0	39.0		10.6	42.6		12.2	29.0		10.0	26.8	26.8
30th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR		Min	Hold	Hold
10th %ile Green (s)	0.0	35.9		8.6	50.5		10.0	29.0		10.0	29.0	29.0
10th %ile Term Code	Skip	Gap		Gap	Hold		Min	MaxR		Min	Hold	Hold

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 116.6			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.39			
Intersection Signal Delay (s/veh): 74.5		Intersection LOS: E	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 126.1			
70th %ile Actuated Cycle: 120.7			
50th %ile Actuated Cycle: 116.2			
30th %ile Actuated Cycle: 112.6			
10th %ile Actuated Cycle: 107.5			

Splits and Phases: 44: Veterans Drive & Magnoila Parkway





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (vph)	33	0	95	1	148	3	150	342	1	6	138	22
Future Volume (vph)	33	0	95	1	148	3	150	342	1	6	138	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.900			0.998						0.982	
Flt Protected		0.987						0.985			0.998	
Satd. Flow (prot)	0	1655	0	0	1859	0	0	1835	0	0	1826	0
Flt Permitted		0.987						0.985			0.998	
Satd. Flow (perm)	0	1655	0	0	1859	0	0	1835	0	0	1826	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1272			1116			5316			5367	
Travel Time (s)		28.9			25.4			120.8			122.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	0	103	1	161	3	163	372	1	7	150	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	165	0	0	536	0	0	181	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

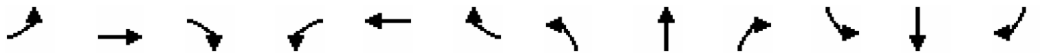
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	17.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	95	1	148	3	150	342	1	6	138	22
Future Vol, veh/h	33	0	95	1	148	3	150	342	1	6	138	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	0	103	1	161	3	163	372	1	7	150	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.6	11.6	23.9	10.9
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	30%	26%	1%	4%
Vol Thru, %	69%	0%	97%	83%
Vol Right, %	0%	74%	2%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	493	128	152	166
LT Vol	150	33	1	6
Through Vol	342	0	148	138
RT Vol	1	95	3	22
Lane Flow Rate	536	139	165	180
Geometry Grp	1	1	1	1
Degree of Util (X)	0.775	0.224	0.28	0.281
Departure Headway (Hd)	5.207	5.801	6.111	5.606
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	691	615	585	639
Service Time	3.252	3.872	4.18	3.668
HCM Lane V/C Ratio	0.776	0.226	0.282	0.282
HCM Control Delay, s/veh	23.9	10.6	11.6	10.9
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	7.5	0.9	1.1	1.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	15	33	93	13	157	10	299	126	98	123	6
Future Volume (vph)	33	15	33	93	13	157	10	299	126	98	123	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.945			0.919			0.961			0.996	
Flt Protected		0.980			0.983			0.999			0.979	
Satd. Flow (prot)	0	1725	0	0	1683	0	0	1788	0	0	1816	0
Flt Permitted		0.980			0.983			0.999			0.979	
Satd. Flow (perm)	0	1725	0	0	1683	0	0	1788	0	0	1816	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1459			1916			1299			5316	
Travel Time (s)		33.2			43.5			29.5			120.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	16	36	101	14	171	11	325	137	107	134	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	88	0	0	286	0	0	473	0	0	248	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	16
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	33	15	33	93	13	157	10	299	126	98	123	6
Future Vol, veh/h	33	15	33	93	13	157	10	299	126	98	123	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	16	36	101	14	171	11	325	137	107	134	7
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.7	13.7	19.9	13
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	41%	35%	43%
Vol Thru, %	69%	19%	5%	54%
Vol Right, %	29%	41%	60%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	435	81	263	227
LT Vol	10	33	93	98
Through Vol	299	15	13	123
RT Vol	126	33	157	6
Lane Flow Rate	473	88	286	247
Geometry Grp	1	1	1	1
Degree of Util (X)	0.699	0.158	0.458	0.404
Departure Headway (Hd)	5.319	6.461	5.771	5.893
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	676	558	617	605
Service Time	3.393	4.461	3.859	3.982
HCM Lane V/C Ratio	0.7	0.158	0.464	0.408
HCM Control Delay, s/veh	19.9	10.7	13.7	13
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	5.7	0.6	2.4	1.9



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	377	58	161	181	187	394
Future Volume (vph)	377	58	161	181	187	394
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		120	0		150	150
Storage Lanes		1	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.980				0.908	
Flt Protected				0.977	0.984	
Satd. Flow (prot)	3468	0	0	3458	1664	0
Flt Permitted				0.977	0.984	
Satd. Flow (perm)	3468	0	0	3458	1664	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	601			563	5273	
Travel Time (s)	13.7			12.8	119.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	410	63	175	197	203	428
Shared Lane Traffic (%)						
Lane Group Flow (vph)	473	0	0	372	631	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

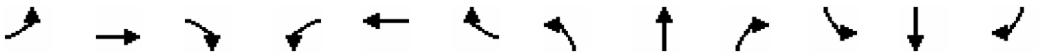
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.6%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	38.6
Intersection LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	377	58	161	181	187	394
Future Vol, veh/h	377	58	161	181	187	394
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	410	63	175	197	203	428
Number of Lanes	2	0	0	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	17.2	16.8	67.4
HCM LOS	C	C	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	32%	0%	0%	73%	0%
Vol Thru, %	0%	100%	68%	27%	100%
Vol Right, %	68%	0%	32%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	581	251	184	221	121
LT Vol	187	0	0	161	0
Through Vol	0	251	126	60	121
RT Vol	394	0	58	0	0
Lane Flow Rate	632	273	200	241	131
Geometry Grp	2	5	5	5	5
Degree of Util (X)	1.026	0.556	0.394	0.515	0.271
Departure Headway (Hd)	5.846	7.449	7.221	7.949	7.572
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	619	486	501	457	477
Service Time	3.929	5.149	4.921	5.649	5.272
HCM Lane V/C Ratio	1.021	0.562	0.399	0.527	0.275
HCM Control Delay, s/veh	67.4	19.1	14.5	18.8	13.1
HCM Lane LOS	F	C	B	C	B
HCM 95th-tile Q	16.3	3.3	1.9	2.9	1.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	0	46	0	0	1	86	996	0	9	721	176
Future Volume (vph)	19	0	46	0	0	1	86	996	0	9	721	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	60		0	120		150	120		150	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.850			0.850						0.971	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1770	3008	0	1863	3008	0	1770	3539	0	1770	3437	0
Flt Permitted	0.625						0.220			0.230		
Satd. Flow (perm)	1164	3008	0	1863	3008	0	410	3539	0	428	3437	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		420			387						50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1082			1201			1142			806	
Travel Time (s)		24.6			27.3			26.0			18.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	21	0	50	0	0	1	93	1083	0	10	784	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	50	0	0	1	0	93	1083	0	10	975	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		17			17			32			32	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
48: Kirby Drive & North Spectrum Boulevard

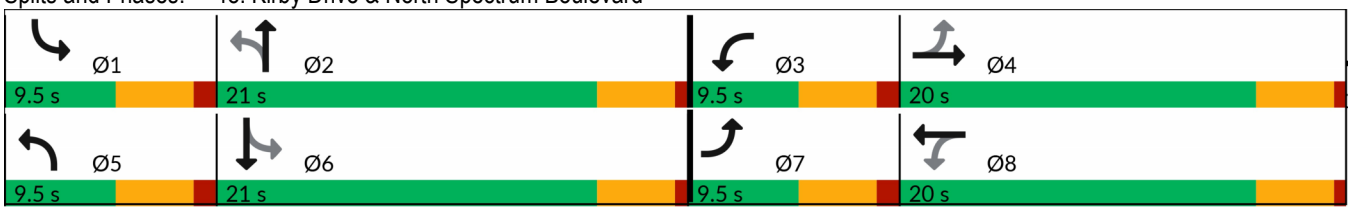
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		9.5	20.0		9.5	21.0		9.5	21.0	
Total Split (%)	15.8%	33.3%		15.8%	33.3%		15.8%	35.0%		15.8%	35.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	6.6	7.1			5.6		28.8	31.2		26.8	26.1	
Actuated g/C Ratio	0.17	0.18			0.14		0.74	0.80		0.69	0.67	
v/c Ratio	0.08	0.06			0.00		0.19	0.38		0.02	0.42	
Control Delay (s/veh)	14.2	0.1			0.0		4.5	7.4		4.3	8.6	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	14.2	0.1			0.0		4.5	7.4		4.3	8.6	
LOS	B	A			A		A	A		A	A	
Approach Delay (s/veh)		4.3						7.2			8.6	
Approach LOS		A						A			A	
90th %ile Green (s)	5.0	15.0		0.0	5.5		5.0	17.0		5.0	17.0	
90th %ile Term Code	Max	Hold		Skip	Gap		Max	MaxR		Max	Max	
70th %ile Green (s)	0.0	5.5		0.0	5.5		5.0	26.5		0.0	17.0	
70th %ile Term Code	Skip	Gap		Skip	Hold		Max	Hold		Skip	Max	
50th %ile Green (s)	0.0	0.0		0.0	0.0		5.0	28.8		0.0	19.3	
50th %ile Term Code	Skip	Skip		Skip	Skip		Max	Dwell		Skip	Dwell	
30th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	32.0		0.0	32.0	
30th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Dwell		Skip	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	32.0		0.0	32.0	
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Dwell		Skip	Dwell	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 38.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay (s/veh): 7.7 Intersection LOS: A
Intersection Capacity Utilization 49.8% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 49.5
70th %ile Actuated Cycle: 40
50th %ile Actuated Cycle: 32.8
30th %ile Actuated Cycle: 36
10th %ile Actuated Cycle: 36

Splits and Phases: 48: Kirby Drive & North Spectrum Boulevard





Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	56	21	25	1060	21	13	743
Future Volume (vph)	56	21	25	1060	21	13	743
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%
Storage Length (ft)	150	150	150		150	120	
Storage Lanes	0	0	1		0	1	
Taper Length (ft)	25		25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor							
Frt		0.850		0.997			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	1583	1770	3529	0	1770	3539
Flt Permitted	0.950		0.950			0.191	
Satd. Flow (perm)	1770	1583	1770	3529	0	356	3539
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		23		4			
Link Speed (mph)	30			30			30
Link Distance (ft)	1050			764			1142
Travel Time (s)	23.9			17.4			26.0
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0
Parking (#/hr)							
Mid-Block Traffic (%)	0%			0%			0%
Adj. Flow (vph)	61	23	27	1152	23	14	808
Shared Lane Traffic (%)							
Lane Group Flow (vph)	61	23	27	1175	0	14	808
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	R NA	Left	Right	Left	Left
Median Width(ft)	12			12			12
Link Offset(ft)	0			0			0
Crosswalk Width(ft)	16			16			16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9		9	15	
Number of Detectors	1	1	1	2		1	2
Detector Template	Left	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0		0	0
Turn Type	Prot	Perm	Prot	NA		pm+pt	NA
Protected Phases	8		5	2		1	6
Permitted Phases		8				6	
Detector Phase	8	8	5	2		1	6
Switch Phase							

Lanes, Volumes, Timings
49: Kirby Drive & South Spectrum Boulevard

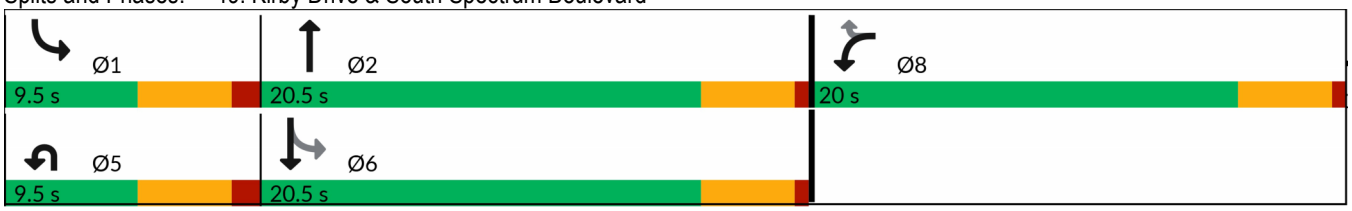
09/16/2024

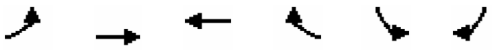
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	4.0	4.0	5.0	4.0		5.0	4.0
Minimum Split (s)	20.0	20.0	9.5	20.0		9.5	20.0
Total Split (s)	20.0	20.0	9.5	20.5		9.5	20.5
Total Split (%)	40.0%	40.0%	19.0%	41.0%		19.0%	41.0%
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	1.0	0.5		1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.0		4.5	4.0
Lead/Lag			Lead	Lag		Lead	Lag
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Recall Mode	None	None	None	Max		None	None
Act Effct Green (s)	6.8	6.8	5.0	27.6		26.3	27.6
Actuated g/C Ratio	0.18	0.18	0.13	0.72		0.69	0.72
v/c Ratio	0.19	0.08	0.12	0.46		0.03	0.32
Control Delay (s/veh)	15.2	7.6	17.0	7.8		3.8	5.4
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	15.2	7.6	17.0	7.8		3.8	5.4
LOS	B	A	B	A		A	A
Approach Delay (s/veh)	13.1			8.0			5.4
Approach LOS	B			A			A
90th %ile Green (s)	8.7	8.7	5.0	16.5		5.0	16.5
90th %ile Term Code	Gap	Gap	Max	MaxR		Max	Max
70th %ile Green (s)	7.2	7.2	0.0	19.7		0.0	19.7
70th %ile Term Code	Gap	Gap	Skip	Dwell		Skip	Dwell
50th %ile Green (s)	6.8	6.8	0.0	28.1		0.0	28.1
50th %ile Term Code	Gap	Gap	Skip	Dwell		Skip	Dwell
30th %ile Green (s)	0.0	0.0	0.0	31.5		0.0	31.5
30th %ile Term Code	Skip	Skip	Skip	Dwell		Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	31.5		0.0	31.5
10th %ile Term Code	Skip	Skip	Skip	Dwell		Skip	Dwell

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 38.3
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay (s/veh): 7.2 Intersection LOS: A
Intersection Capacity Utilization 40.0% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 42.7
70th %ile Actuated Cycle: 34.9
50th %ile Actuated Cycle: 42.9
30th %ile Actuated Cycle: 35.5
10th %ile Actuated Cycle: 35.5

Splits and Phases: 49: Kirby Drive & South Spectrum Boulevard



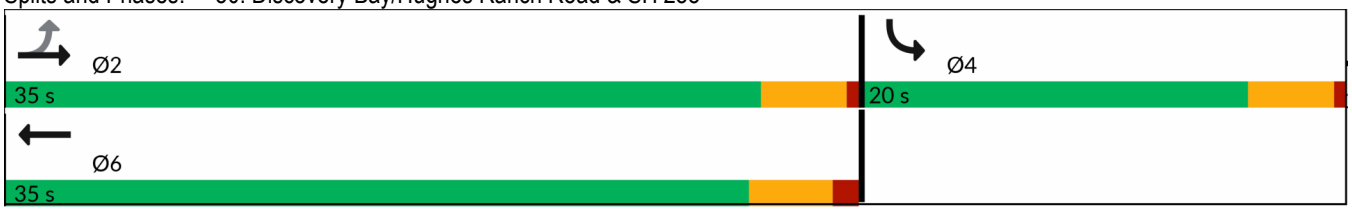


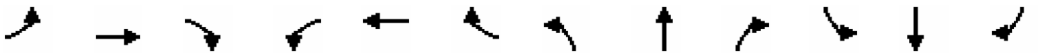
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	511	24	19	298	52	28
Future Volume (vph)	511	24	19	298	52	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	150	150
Storage Lanes	0			0	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.873		0.953	
Flt Protected		0.954			0.968	
Satd. Flow (prot)	0	1777	1626	0	1718	0
Flt Permitted		0.519			0.968	
Satd. Flow (perm)	0	967	1626	0	1718	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			324		30	
Link Speed (mph)		30	30		30	
Link Distance (ft)		769	312		2088	
Travel Time (s)		17.5	7.1		47.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	555	26	21	324	57	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	581	345	0	87	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Turn Type	Perm	NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases	2					
Detector Phase	2	2	6		4	
Switch Phase						

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	4.0	4.0	5.0		4.0	
Minimum Split (s)	20.0	20.0	22.5		20.0	
Total Split (s)	35.0	35.0	35.0		20.0	
Total Split (%)	63.6%	63.6%	63.6%		36.4%	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	1.0		0.5	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.0	4.5		4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max		None	
Act Effct Green (s)		43.9	43.6		7.4	
Actuated g/C Ratio		0.82	0.81		0.14	
v/c Ratio		0.73	0.25		0.33	
Control Delay (s/veh)		15.2	1.1		18.1	
Queue Delay		0.0	0.0		0.0	
Total Delay (s/veh)		15.2	1.1		18.1	
LOS		B	A		B	
Approach Delay (s/veh)		15.2	1.1		18.1	
Approach LOS		B	A		B	
90th %ile Green (s)	33.0	33.0	32.5		9.8	
90th %ile Term Code	Dwell	Dwell	Dwell		Gap	
70th %ile Green (s)	39.0	39.0	38.5		8.5	
70th %ile Term Code	Dwell	Dwell	Dwell		Gap	
50th %ile Green (s)	46.0	46.0	45.5		7.4	
50th %ile Term Code	Dwell	Dwell	Dwell		Gap	
30th %ile Green (s)	46.0	46.0	45.5		0.0	
30th %ile Term Code	Dwell	Dwell	Dwell		Skip	
10th %ile Green (s)	46.0	46.0	45.5		0.0	
10th %ile Term Code	Dwell	Dwell	Dwell		Skip	

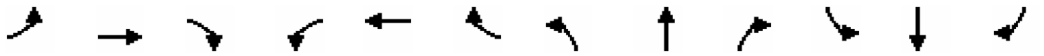
Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 53.5			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 10.7		Intersection LOS: B	
Intersection Capacity Utilization 64.0%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 50.8			
70th %ile Actuated Cycle: 55.5			
50th %ile Actuated Cycle: 61.4			
30th %ile Actuated Cycle: 50			
10th %ile Actuated Cycle: 50			

Splits and Phases: 50: Discovery Bay/Hughes Ranch Road & SH 288





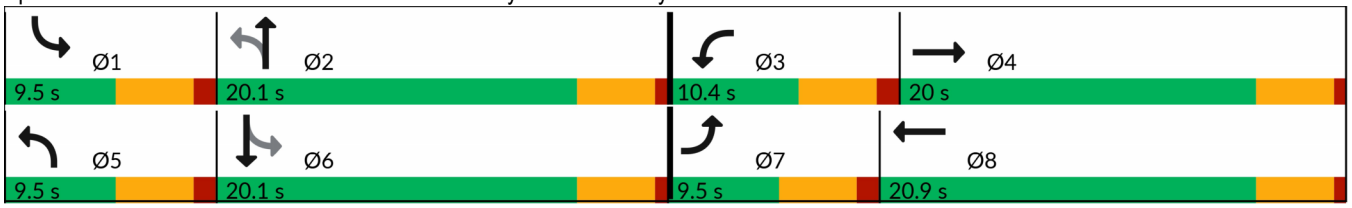
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	110	4	127	518	64	56	74	43	184	197	84
Future Volume (vph)	18	110	4	127	518	64	56	74	43	184	197	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	220		150	40		40	150		150
Storage Lanes	0		0	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.983			0.944			0.955	
Flt Protected		0.993		0.950			0.950			0.950		
Satd. Flow (prot)	0	3500	0	1770	3479	0	1770	3341	0	1770	1779	0
Flt Permitted		0.832		0.950			0.500			0.636		
Satd. Flow (perm)	0	2933	0	1770	3479	0	931	3341	0	1185	1779	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			22			47			35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		215			3362			510			402	
Travel Time (s)		4.9			76.4			11.6			9.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	20	120	4	138	563	70	61	80	47	200	214	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	144	0	138	633	0	61	127	0	200	305	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		10.4	20.9		9.5	20.1		9.5	20.1	
Total Split (%)	15.8%	33.3%		17.3%	34.8%		15.8%	33.5%		15.8%	33.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)		10.7		7.2	19.5		20.0	16.8		20.9	18.7	
Actuated g/C Ratio		0.21		0.14	0.38		0.39	0.32		0.40	0.36	
v/c Ratio		5.00dl		0.56	0.48		0.14	0.11		0.37	0.46	
Control Delay (s/veh)		30.9		38.5	13.0		10.6	11.1		13.2	17.1	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		30.9		38.5	13.0		10.6	11.1		13.2	17.1	
LOS		C		D	B		B	B		B	B	
Approach Delay (s/veh)		30.9			17.5			10.9			15.6	
Approach LOS		C			B			B			B	
90th %ile Green (s)	0.0	16.0		5.9	26.4		5.0	16.1		5.0	16.1	
90th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Max	
70th %ile Green (s)	0.0	13.0		5.9	23.4		5.0	16.1		5.0	16.1	
70th %ile Term Code	Skip	Gap		Max	Hold		Max	MaxR		Max	Hold	
50th %ile Green (s)	0.0	10.8		5.9	21.2		5.0	16.1		5.0	16.1	
50th %ile Term Code	Skip	Gap		Max	Hold		Max	MaxR		Max	Hold	
30th %ile Green (s)	0.0	8.8		5.9	19.2		0.0	16.1		5.0	25.6	
30th %ile Term Code	Skip	Gap		Max	Hold		Skip	MaxR		Max	Hold	
10th %ile Green (s)	0.0	0.0		9.2	9.7		0.0	16.1		0.0	16.1	
10th %ile Term Code	Skip	Skip		Hold	Gap		Skip	MaxR		Skip	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 51.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay (s/veh): 17.3		Intersection LOS: B	
Intersection Capacity Utilization 46.0%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 60			
70th %ile Actuated Cycle: 57			
50th %ile Actuated Cycle: 54.8			
30th %ile Actuated Cycle: 52.8			
10th %ile Actuated Cycle: 33.8			
dl Defacto Left Lane. Recode with 1 though lane as a left lane.			
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			

Splits and Phases: 51: Smith Ranch Road/Country Place Parkway

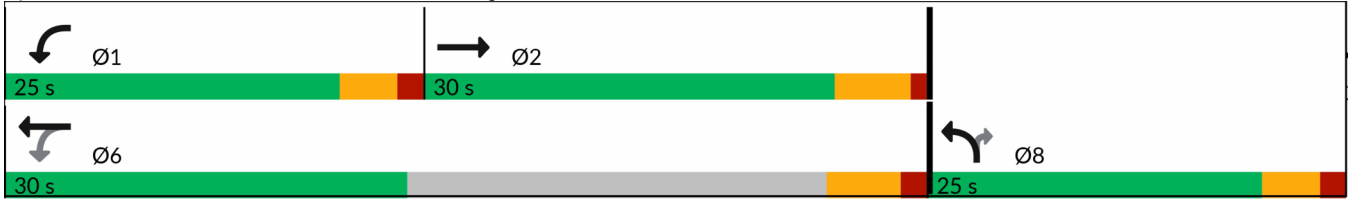


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	383	133	187	431	222	333
Future Volume (vph)	383	133	187	431	222	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	120		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.961					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3401	0	1770	3539	1770	1583
Flt Permitted			0.255		0.950	
Satd. Flow (perm)	3401	0	475	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	63					362
Link Speed (mph)	30			30	30	
Link Distance (ft)	3362			2489	974	
Travel Time (s)	76.4			56.6	22.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	416	145	203	468	241	362
Shared Lane Traffic (%)						
Lane Group Flow (vph)	561	0	203	468	241	362
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	11.0		4.0	11.0	5.0	5.0
Minimum Split (s)	25.0		20.0	25.0	21.0	21.0
Total Split (s)	30.0		25.0	30.0	25.0	25.0
Total Split (%)	37.5%		31.3%	37.5%	31.3%	31.3%
Yellow Time (s)	4.5		3.5	4.5	3.5	3.5
All-Red Time (s)	1.0		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	Max	Max
Act Effct Green (s)	15.3		30.2	29.2	20.2	20.2
Actuated g/C Ratio	0.25		0.50	0.48	0.33	0.33
v/c Ratio	0.62		0.46	0.27	0.41	0.47
Control Delay (s/veh)	20.9		11.9	9.5	19.6	4.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.9		11.9	9.5	19.6	4.7
LOS	C		B	A	B	A
Approach Delay (s/veh)	20.9			10.2	10.7	
Approach LOS	C			B	B	
90th %ile Green (s)	20.8		12.2	37.5	20.0	20.0
90th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
70th %ile Green (s)	17.7		10.5	32.7	20.0	20.0
70th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
50th %ile Green (s)	14.7		9.3	28.5	20.0	20.0
50th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
30th %ile Green (s)	13.0		8.3	25.8	20.0	20.0
30th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
10th %ile Green (s)	11.0		6.9	22.4	20.0	20.0
10th %ile Term Code	Min		Gap	Hold	MaxR	MaxR

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 60.4			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 13.6		Intersection LOS: B	
Intersection Capacity Utilization 50.4%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 68.5			
70th %ile Actuated Cycle: 63.7			
50th %ile Actuated Cycle: 59.5			
30th %ile Actuated Cycle: 56.8			
10th %ile Actuated Cycle: 53.4			

Splits and Phases: 52: Miller Ranch Road & Hughes Ranch Road





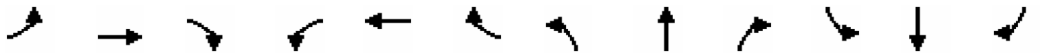
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	536	266	141	444	224	138
Future Volume (vph)	536	266	141	444	224	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	80		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.950				0.948	
Flt Protected			0.950		0.970	
Satd. Flow (prot)	3362	0	1770	3539	1713	0
Flt Permitted			0.180		0.970	
Satd. Flow (perm)	3362	0	335	3539	1713	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	183				65	
Link Speed (mph)	30			30	30	
Link Distance (ft)	2489			1502	641	
Travel Time (s)	56.6			34.1	14.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	583	289	153	483	243	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	872	0	153	483	393	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	4.0		5.0	4.0	4.0	
Minimum Split (s)	20.0		9.5	20.0	20.0	
Total Split (s)	20.5		9.5	30.0	20.0	
Total Split (%)	41.0%		19.0%	60.0%	40.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.5	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max		None	None	None	
Act Effct Green (s)	17.7		24.4	24.9	13.1	
Actuated g/C Ratio	0.38		0.53	0.54	0.28	
v/c Ratio	0.62		0.46	0.25	0.74	
Control Delay (s/veh)	12.7		10.9	6.5	22.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	12.7		10.9	6.5	22.2	
LOS	B		B	A	C	
Approach Delay (s/veh)	12.7			7.6	22.2	
Approach LOS	B			A	C	
90th %ile Green (s)	16.5		5.0	26.0	16.0	
90th %ile Term Code	MaxR		Max	Hold	Max	
70th %ile Green (s)	16.5		5.0	26.0	16.0	
70th %ile Term Code	MaxR		Max	Hold	Max	
50th %ile Green (s)	16.5		5.0	26.0	14.7	
50th %ile Term Code	MaxR		Max	Hold	Gap	
30th %ile Green (s)	16.5		5.0	26.0	11.8	
30th %ile Term Code	MaxR		Max	Hold	Gap	
10th %ile Green (s)	20.1		0.0	20.1	7.8	
10th %ile Term Code	Dwell		Skip	Dwell	Gap	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 46.1			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 13.0		Intersection LOS: B	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 50			
70th %ile Actuated Cycle: 50			
50th %ile Actuated Cycle: 48.7			
30th %ile Actuated Cycle: 45.8			
10th %ile Actuated Cycle: 35.9			

Splits and Phases: 53: Bryan Court & Hughes Ranch Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	75	188	28	135	123	219	1184	19	84	870	101
Future Volume (vph)	179	75	188	28	135	123	219	1184	19	84	870	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		150	80		150	330		150	330		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.933	0.850		0.928			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1651	1504	1770	1729	0	1770	3532	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1651	1504	1770	1729	0	1770	3532	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21	137		23			1				87
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3319			5457			763			632	
Travel Time (s)		75.4			124.0			17.3			14.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	195	82	204	30	147	134	238	1287	21	91	946	110
Shared Lane Traffic (%)			33%									
Lane Group Flow (vph)	195	149	137	30	281	0	238	1308	0	91	946	110
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												

Lanes, Volumes, Timings
54: Cullen Boulevard & Hughes Ranch Road

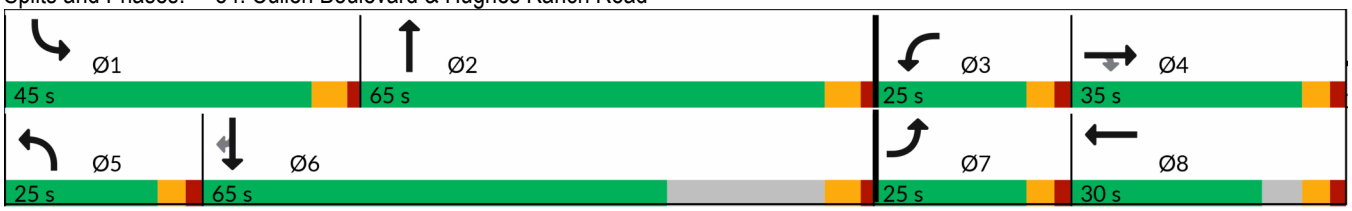
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	5.0	5.0	3.0	5.0		3.0	7.0		3.0	7.0	7.0
Minimum Split (s)	20.0	25.0	25.0	20.0	25.0		20.0	45.0		20.0	45.0	45.0
Total Split (s)	25.0	35.0	35.0	25.0	30.0		25.0	65.0		45.0	65.0	65.0
Total Split (%)	14.7%	20.6%	20.6%	14.7%	17.6%		14.7%	38.2%		26.5%	38.2%	38.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	4.5		4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	Max		None	None	None
Act Effct Green (s)	19.4	39.9	39.9	7.9	23.7		19.5	65.3		12.7	59.0	59.0
Actuated g/C Ratio	0.13	0.28	0.28	0.05	0.16		0.14	0.45		0.09	0.41	0.41
v/c Ratio	0.82	0.32	0.27	0.31	0.93		1.00	0.82		0.58	1.24	0.16
Control Delay (s/veh)	86.6	39.4	8.2	73.6	90.4		118.1	40.1		77.8	156.2	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	86.6	39.4	8.2	73.6	90.4		118.1	40.1		77.8	156.2	8.4
LOS	F	D	A	E	F		F	D		E	F	A
Approach Delay (s/veh)		49.6			88.7			52.1			135.8	
Approach LOS		D			F			D			F	
90th %ile Green (s)	19.5	33.6	33.6	10.4	24.5		19.5	60.8		17.2	59.0	59.0
90th %ile Term Code	Max	Hold	Hold	Gap	Max		Max	Hold		Gap	Max	Max
70th %ile Green (s)	19.5	35.1	35.1	8.9	24.5		19.5	63.4		14.6	59.0	59.0
70th %ile Term Code	Max	Hold	Hold	Gap	Max		Max	Hold		Gap	Max	Max
50th %ile Green (s)	19.5	36.1	36.1	7.9	24.5		19.5	65.2		12.8	59.0	59.0
50th %ile Term Code	Max	Hold	Hold	Gap	Max		Max	Hold		Gap	Max	Max
30th %ile Green (s)	19.5	49.5	49.5	0.0	24.5		19.5	67.1		10.9	59.0	59.0
30th %ile Term Code	Max	Hold	Hold	Skip	Max		Max	Hold		Gap	Max	Max
10th %ile Green (s)	19.2	45.1	45.1	0.0	20.4		19.5	69.8		8.2	59.0	59.0
10th %ile Term Code	Gap	Hold	Hold	Skip	Gap		Max	Hold		Gap	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 170
Actuated Cycle Length: 144.1
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.24
Intersection Signal Delay (s/veh): 82.6 Intersection LOS: F
Intersection Capacity Utilization 101.2% ICU Level of Service G
Analysis Period (min) 15
90th %ile Actuated Cycle: 145
70th %ile Actuated Cycle: 145
50th %ile Actuated Cycle: 145
30th %ile Actuated Cycle: 145
10th %ile Actuated Cycle: 140.6

Splits and Phases: 54: Cullen Boulevard & Hughes Ranch Road





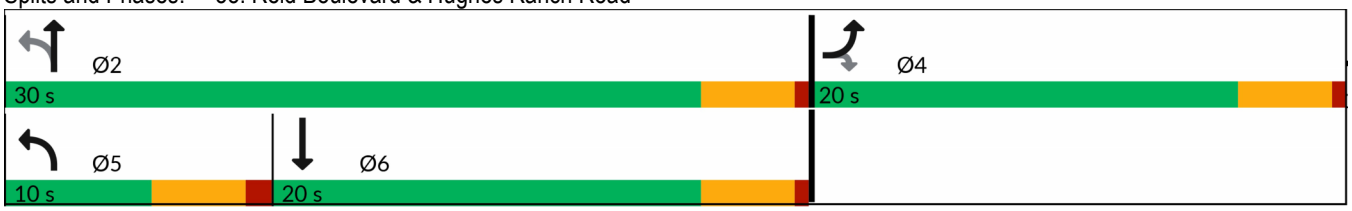
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	151	191	221	141	19
Future Volume (vph)	13	151	191	221	141	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	500	150	150			150
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor						
Frt		0.850			0.982	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3476	0
Flt Permitted	0.950		0.527			
Satd. Flow (perm)	1770	1583	982	3539	3476	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		164			21	
Link Speed (mph)	30			30	30	
Link Distance (ft)	5457			901	567	
Travel Time (s)	124.0			20.5	12.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	14	164	208	240	153	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	164	208	240	174	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Detector Phase	4	4	5	2	6	
Switch Phase						

Lanes, Volumes, Timings
55: Reid Boulevard & Hughes Ranch Road 09/16/2024

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Initial (s)	4.0	4.0	5.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	9.5	20.0	20.0	
Total Split (s)	20.0	20.0	10.0	30.0	20.0	
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	1.0	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	Max	None	
Act Effct Green (s)	6.6	6.6	28.3	29.6	21.4	
Actuated g/C Ratio	0.16	0.16	0.68	0.71	0.51	
v/c Ratio	0.05	0.42	0.27	0.10	0.10	
Control Delay (s/veh)	14.4	7.2	4.4	3.1	7.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	14.4	7.2	4.4	3.1	7.5	
LOS	B	A	A	A	A	
Approach Delay (s/veh)	7.8			3.7	7.5	
Approach LOS	A			A	A	
90th %ile Green (s)	9.4	9.4	5.5	26.0	16.0	
90th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
70th %ile Green (s)	7.0	7.0	5.5	26.0	16.0	
70th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
50th %ile Green (s)	5.7	5.7	5.5	26.0	16.0	
50th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
30th %ile Green (s)	5.5	5.5	5.5	26.0	16.0	
30th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
10th %ile Green (s)	0.0	0.0	0.0	41.0	41.0	
10th %ile Term Code	Skip	Skip	Skip	Dwell	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 41.7			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay (s/veh): 5.4		Intersection LOS: A	
Intersection Capacity Utilization 28.4%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 43.4			
70th %ile Actuated Cycle: 41			
50th %ile Actuated Cycle: 39.7			
30th %ile Actuated Cycle: 39.5			
10th %ile Actuated Cycle: 45			

Splits and Phases: 55: Reid Boulevard & Hughes Ranch Road





Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1569	97		395	
Travel Time (s)		35.7	2.2		9.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	0	0	-	0	1	0
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	-	0	1022	-
Stage 1	-	-	-	0	-	-
Stage 2	-	-	-	0	1022	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	-	-	-	1022	-
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	1022	-

Approach	SE	NW	SW
HCM Control Delay, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NWT	SEL	SETSWLn1	
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	-	0	-	0
HCM Lane LOS	-	A	-	A
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	7	0	0	1837	21
Future Volume (vph)	0	7	0	0	1837	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Ped Bike Factor						
Frt		0.865				0.850
Flt Protected						
Satd. Flow (prot)	0	1611	0	0	3539	1583
Flt Permitted						
Satd. Flow (perm)	0	1611	0	0	3539	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	216			500	772	
Travel Time (s)	4.9			11.4	17.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	8	0	0	1997	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	8	0	0	1997	23
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

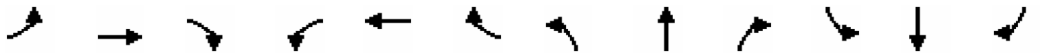
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	0	0	1837	21
Future Vol, veh/h	0	7	0	0	1837	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	-	-	-	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	1997	23

Major/Minor	Minor2			Major2	
Conflicting Flow All	-	998		-	0
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	6.94		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	3.32		-	-
Pot Cap-1 Maneuver	0	242		-	0
Stage 1	0	-		-	0
Stage 2	0	-		-	0
Platoon blocked, %				-	
Mov Cap-1 Maneuver	-	242		-	-
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	SB
HCM Control Delay, s/v	20.35	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT
Capacity (veh/h)	242	-
HCM Lane V/C Ratio	0.031	-
HCM Control Delay (s/veh)	20.4	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	0.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	148	74	74	148	74	37	74	37	37	74	37
Future Volume (vph)	74	148	74	74	148	74	37	74	37	37	74	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.950			0.950			0.950			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3362	0	1770	3362	0	1770	1770	0	1770	1770	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3362	0	1770	3362	0	1770	1770	0	1770	1770	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3590			2239			733			785	
Travel Time (s)		81.6			50.9			16.7			17.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	80	161	80	80	161	80	40	80	40	40	80	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	241	0	80	241	0	40	120	0	40	120	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.3%		ICU Level of Service A	
Analysis Period (min) 15			

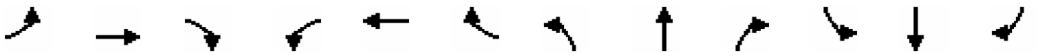
Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	148	74	74	148	74	37	74	37	37	74	37
Future Vol, veh/h	74	148	74	74	148	74	37	74	37	37	74	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	161	80	80	161	80	40	80	40	40	80	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	241	0	0	241	0	0	643	764	121	643	764	121
Stage 1	-	-	-	-	-	-	362	362	-	362	362	-
Stage 2	-	-	-	-	-	-	282	402	-	282	402	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1322	-	-	1322	-	-	358	332	908	358	332	908
Stage 1	-	-	-	-	-	-	629	624	-	629	624	-
Stage 2	-	-	-	-	-	-	702	599	-	702	599	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1322	-	-	1322	-	-	226	293	908	226	293	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	226	293	-	226	293	-
Stage 1	-	-	-	-	-	-	591	586	-	591	586	-
Stage 2	-	-	-	-	-	-	543	562	-	543	562	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.97	1.97	20.25	20.25
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	226	378	1322	-	-	1322	-	-	226	378
HCM Lane V/C Ratio	0.178	0.319	0.061	-	-	0.061	-	-	0.178	0.319
HCM Control Delay (s/veh)	24.3	18.9	7.9	-	-	7.9	-	-	24.3	18.9
HCM Lane LOS	C	C	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.6	1.3	0.2	-	-	0.2	-	-	0.6	1.3



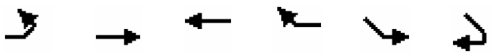
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	3539	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	3539	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2249			1932			317			367	
Travel Time (s)		51.1			43.9			7.2			8.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	150		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1502			3319	640	
Travel Time (s)	34.1			75.4	14.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

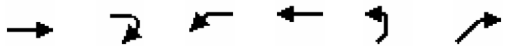


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			2	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	0	3278	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	0	3278	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1127	502		1418	
Travel Time (s)		25.6	11.4		32.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

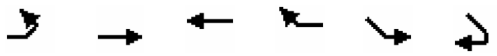
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	15	0	0	0	9
Future Volume (vph)	0	15	0	0	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	0	2
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.88
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	3539	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	0	3539	0	0	0	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	683		720	
Travel Time (s)		5.3	15.5		16.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	16	0	0	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	16	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		20	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		0	0		0	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



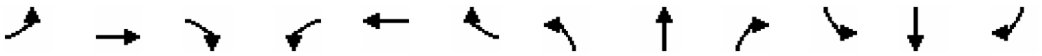
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	312			213	239	
Travel Time (s)	7.1			4.8	5.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	1863	1863	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	1863	1863	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		213	215		156	
Travel Time (s)		4.8	4.9		3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



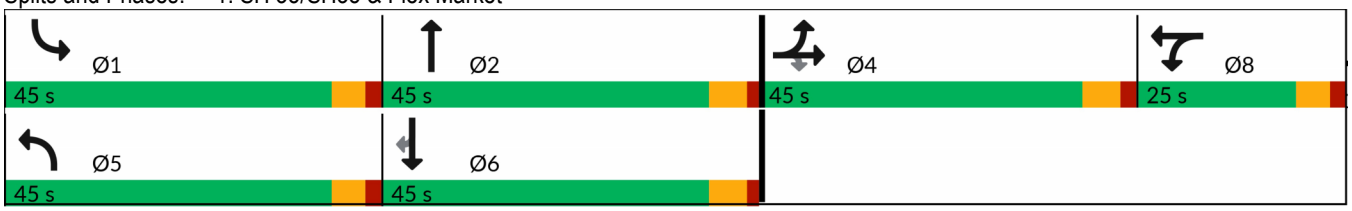
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	6	0	18	0	1599	3	3	2231	1
Future Volume (vph)	1	1	1	6	0	18	0	1599	3	3	2231	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	120		150
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	0			0			50			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850		0.900							0.850
Flt Protected		0.976			0.987					0.950		
Satd. Flow (prot)	0	1818	1583	0	1655	0	1863	5085	0	1770	5085	1583
Flt Permitted		0.976			0.987					0.950		
Satd. Flow (perm)	0	1818	1583	0	1655	0	1863	5085	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		106							106
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		769			683			1825			845	
Travel Time (s)		17.5			15.5			41.5			19.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	1	1	7	0	20	0	1738	3	3	2425	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	1	0	27	0	0	1741	0	3	2425	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												

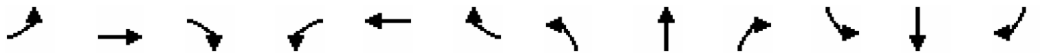
Lanes, Volumes, Timings
1: SH 35/SH35 & Flex Market 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	25.0	25.0	25.0	22.0	22.0		25.0	45.0		25.0	45.0	45.0
Total Split (s)	45.0	45.0	45.0	25.0	25.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	28.1%	28.1%	28.1%	15.6%	15.6%		28.1%	28.1%		28.1%	28.1%	28.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	Max		None	None	None
Act Effct Green (s)		5.7	5.7		5.6			56.8		5.8	58.8	58.8
Actuated g/C Ratio		0.09	0.09		0.08			0.85		0.09	0.88	0.88
v/c Ratio		0.01	0.00		0.11			0.40		0.02	0.54	0.00
Control Delay (s/veh)		33.5	0.0		1.0			5.4		33.3	4.3	0.0
Queue Delay		0.0	0.0		0.0			0.0		0.0	0.0	0.0
Total Delay (s/veh)		33.5	0.0		1.0			5.4		33.3	4.3	0.0
LOS		C	A		A			A		C	A	A
Approach Delay (s/veh)		22.3			1.0			5.4			4.3	
Approach LOS		C			A			A			A	
90th %ile Green (s)	5.9	5.9	5.9	5.5	5.5		0.0	40.8		6.1	52.9	52.9
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip	Dwell		Gap	Dwell	Dwell
70th %ile Green (s)	0.0	0.0	0.0	5.5	5.5		0.0	54.0		0.0	54.0	54.0
70th %ile Term Code	Skip	Skip	Skip	Gap	Gap		Skip	Dwell		Skip	Dwell	Dwell
50th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
50th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 66.9			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay (s/veh): 4.8		Intersection LOS: A	
Intersection Capacity Utilization 65.2%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 82.8			
70th %ile Actuated Cycle: 71.5			
50th %ile Actuated Cycle: 60			
30th %ile Actuated Cycle: 60			
10th %ile Actuated Cycle: 60			

Splits and Phases: 1: SH 35/SH35 & Flex Market





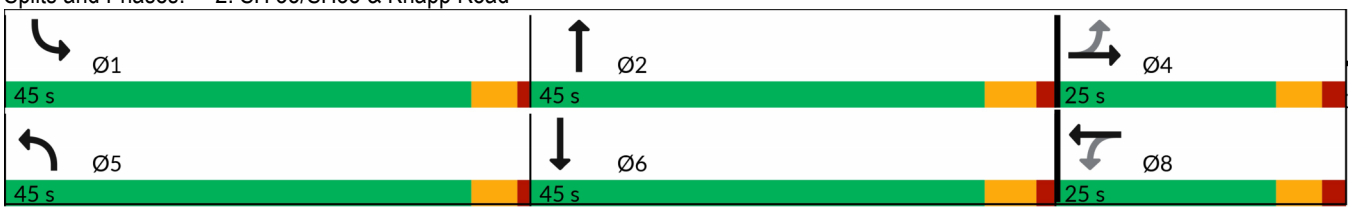
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	0	1	25	0	86	3	1452	30	151	2127	9
Future Volume (vph)	22	0	1	25	0	86	3	1452	30	151	2127	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	500		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.995			0.895			0.997			0.999	
Flt Protected		0.954			0.989		0.950			0.950		
Satd. Flow (prot)	0	1768	0	0	1649	0	1770	5070	0	1770	5080	0
Flt Permitted		0.640			0.915		0.950			0.950		
Satd. Flow (perm)	0	1186	0	0	1525	0	1770	5070	0	1770	5080	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			93			3			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			854			3282			1825	
Travel Time (s)		9.6			19.4			74.6			41.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	24	0	1	27	0	93	3	1578	33	164	2312	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	120	0	3	1611	0	164	2322	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

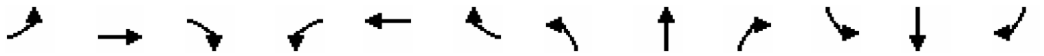
Lanes, Volumes, Timings
2: SH 35/SH35 & Knapp Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		25.0	45.0		25.0	45.0	
Total Split (s)	25.0	25.0		25.0	25.0		45.0	45.0		45.0	45.0	
Total Split (%)	21.7%	21.7%		21.7%	21.7%		39.1%	39.1%		39.1%	39.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		5.0	6.0		5.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)		7.5			7.5		5.7	40.3		12.5	55.7	
Actuated g/C Ratio		0.10			0.10		0.07	0.52		0.16	0.72	
v/c Ratio		0.14			0.52		0.02	0.61		0.58	0.63	
Control Delay (s/veh)		1.6			20.1		35.7	15.1		38.4	7.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		1.6			20.1		35.7	15.1		38.4	7.6	
LOS		A			C		D	B		D	A	
Approach Delay (s/veh)		1.6			20.1			15.1			9.7	
Approach LOS		A			C			B			A	
90th %ile Green (s)	11.5	11.5		11.5	11.5		6.2	39.0		17.6	50.4	
90th %ile Term Code	Hold	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	8.6	8.6		8.6	8.6		0.0	39.0		14.2	58.2	
70th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
50th %ile Green (s)	6.8	6.8		6.8	6.8		0.0	39.0		12.2	56.2	
50th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
30th %ile Green (s)	5.5	5.5		5.5	5.5		0.0	39.0		10.4	54.4	
30th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	5.5	5.5		5.5	5.5		0.0	44.6		8.4	58.0	
10th %ile Term Code	Hold	Hold		Gap	Gap		Skip	Dwell		Gap	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 77.3			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 12.0		Intersection LOS: B	
Intersection Capacity Utilization 65.8%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 85.1			
70th %ile Actuated Cycle: 78.8			
50th %ile Actuated Cycle: 75			
30th %ile Actuated Cycle: 71.9			
10th %ile Actuated Cycle: 75.5			

Splits and Phases: 2: SH 35/SH35 & Knapp Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	287	617	298	222	622	62	250	1115	173	231	1560	506
Future Volume (vph)	287	617	298	222	622	62	250	1115	173	231	1560	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	200		150	150		150	500		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.951			0.986			0.980			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3366	0	1770	3490	0	1770	4984	0	1770	4897	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3366	0	1770	3490	0	1770	4984	0	1770	4897	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68			8			26			72	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1206			2764			3429			3282	
Travel Time (s)		27.4			62.8			77.9			74.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	312	671	324	241	676	67	272	1212	188	251	1696	550
Shared Lane Traffic (%)												
Lane Group Flow (vph)	312	995	0	241	743	0	272	1400	0	251	2246	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
3: SH 35/SH35 & McHard Road

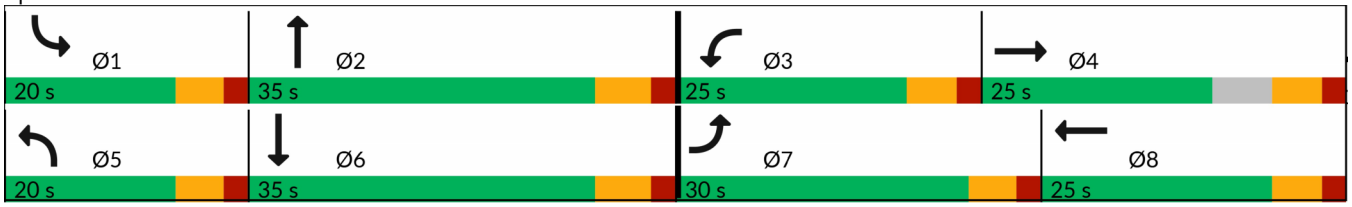
09/16/2024

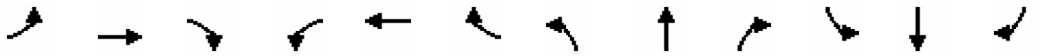
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	8.0		3.0	8.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	20.0	24.0		15.0	24.0		15.0	30.0		15.0	30.0	
Total Split (s)	30.0	25.0		25.0	25.0		20.0	35.0		20.0	35.0	
Total Split (%)	27.3%	22.7%		22.7%	22.7%		18.2%	31.8%		18.2%	31.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.5		6.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	22.0	23.4		17.6	19.0		14.0	28.5		14.0	28.5	
Actuated g/C Ratio	0.20	0.22		0.16	0.18		0.13	0.26		0.13	0.26	
v/c Ratio	0.87	1.27		0.84	1.20		1.19	1.05		1.10	1.67	
Control Delay (s/veh)	65.7	166.3		69.0	143.2		161.2	77.2		132.2	332.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	65.7	166.3		69.0	143.2		161.2	77.2		132.2	332.4	
LOS	E	F		E	F		F	E		F	F	
Approach Delay (s/veh)		142.3			125.0			90.8			312.3	
Approach LOS		F			F			F			F	
90th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	28.5		14.0	28.5	
90th %ile Term Code	Max	Hold		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	28.5		14.0	28.5	
70th %ile Term Code	Max	Hold		Max	Max		Max	MaxR		Max	MaxR	
50th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	28.5		14.0	28.5	
50th %ile Term Code	Max	Hold		Max	Max		Max	MaxR		Max	MaxR	
30th %ile Green (s)	21.6	22.9		17.7	19.0		14.0	28.5		14.0	28.5	
30th %ile Term Code	Gap	Hold		Gap	Max		Max	MaxR		Max	MaxR	
10th %ile Green (s)	16.6	22.2		13.4	19.0		14.0	28.5		14.0	28.5	
10th %ile Term Code	Gap	Hold		Gap	Max		Max	MaxR		Max	MaxR	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 108
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.67
Intersection Signal Delay (s/veh): 192.1 Intersection LOS: F
Intersection Capacity Utilization 114.6% ICU Level of Service H
Analysis Period (min) 15
90th %ile Actuated Cycle: 110
70th %ile Actuated Cycle: 110
50th %ile Actuated Cycle: 110
30th %ile Actuated Cycle: 107.6
10th %ile Actuated Cycle: 102.6

Splits and Phases: 3: SH 35/SH35 & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	3	58	280	0	56	21	1184	262	154	1893	1
Future Volume (vph)	33	3	58	280	0	56	21	1184	262	154	1893	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	120		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850		0.973				
Flt Protected		0.956			0.950		0.950			0.950		
Satd. Flow (prot)	0	1781	1583	0	1770	1583	1770	4948	0	1770	5085	0
Flt Permitted		0.956			0.950		0.950			0.950		
Satd. Flow (perm)	0	1781	1583	0	1770	1583	1770	4948	0	1770	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109			109		33				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		568			482			1254			3429	
Travel Time (s)		12.9			11.0			28.5			77.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	3	63	304	0	61	23	1287	285	167	2058	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	63	0	304	61	23	1572	0	167	2059	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
4: SH 35/SH35 & PISD

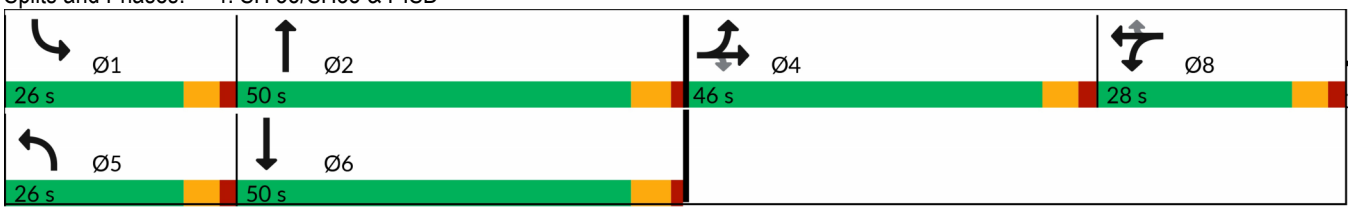
09/16/2024

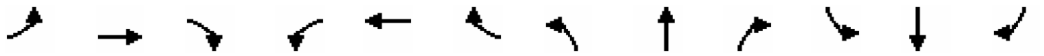
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0	10.0	5.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0	45.0	25.0	25.0	25.0	25.0	45.0		25.0	24.0	
Total Split (s)	46.0	46.0	46.0	28.0	28.0	28.0	26.0	50.0		26.0	50.0	
Total Split (%)	30.7%	30.7%	30.7%	18.7%	18.7%	18.7%	17.3%	33.3%		17.3%	33.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Act Effct Green (s)		10.2	10.2		22.2	22.2	7.1	44.4		15.7	58.2	
Actuated g/C Ratio		0.09	0.09		0.20	0.20	0.06	0.39		0.14	0.52	
v/c Ratio		0.24	0.26		0.88	0.15	0.21	0.80		0.68	0.79	
Control Delay (s/veh)		54.8	4.2		71.4	1.8	57.0	34.7		61.4	27.2	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		54.8	4.2		71.4	1.8	57.0	34.7		61.4	27.2	
LOS		D	A		E	A	E	C		E	C	
Approach Delay (s/veh)		23.6			59.8			35.0			29.8	
Approach LOS		C			E			D			C	
90th %ile Green (s)	10.6	10.6	10.6	22.0	22.0	22.0	9.0	44.0		20.0	55.0	
90th %ile Term Code	Gap	Gap	Gap	Max	Max	Max	Gap	MaxR		Max	Hold	
70th %ile Green (s)	10.0	10.0	10.0	22.0	22.0	22.0	7.8	44.0		18.8	55.0	
70th %ile Term Code	Min	Min	Min	Max	Max	Max	Gap	MaxR		Gap	Hold	
50th %ile Green (s)	10.0	10.0	10.0	22.0	22.0	22.0	7.0	44.0		16.4	53.4	
50th %ile Term Code	Min	Min	Min	Max	Max	Max	Gap	MaxR		Gap	Hold	
30th %ile Green (s)	10.0	10.0	10.0	22.0	22.0	22.0	0.0	44.0		14.1	64.1	
30th %ile Term Code	Min	Min	Min	Max	Max	Max	Skip	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	0.0	0.0	22.0	22.0	22.0	0.0	44.0		10.1	60.1	
10th %ile Term Code	Skip	Skip	Skip	Max	Max	Max	Skip	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 112.8
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay (s/veh): 34.1 Intersection LOS: C
Intersection Capacity Utilization 77.1% ICU Level of Service D
Analysis Period (min) 15
90th %ile Actuated Cycle: 120.6
70th %ile Actuated Cycle: 118.8
50th %ile Actuated Cycle: 116.4
30th %ile Actuated Cycle: 114.1
10th %ile Actuated Cycle: 94.1

Splits and Phases: 4: SH 35/SH35 & PISD





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	112	144	110	155	110	115	155	110	133	1054	62
Future Volume (vph)	170	112	144	110	155	110	115	155	110	133	1054	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	200		100	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.916			0.937			0.937			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3242	0	1770	3316	0	1770	4765	0	1770	5045	0
Flt Permitted	0.319			0.580			0.950			0.950		
Satd. Flow (perm)	594	3242	0	1080	3316	0	1770	4765	0	1770	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		157			108			120			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2722			832			2002			1254	
Travel Time (s)		61.9			18.9			45.5			28.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	185	122	157	120	168	120	125	168	120	145	1146	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	279	0	120	288	0	125	288	0	145	1213	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
5: SH 35 & W Orange Street

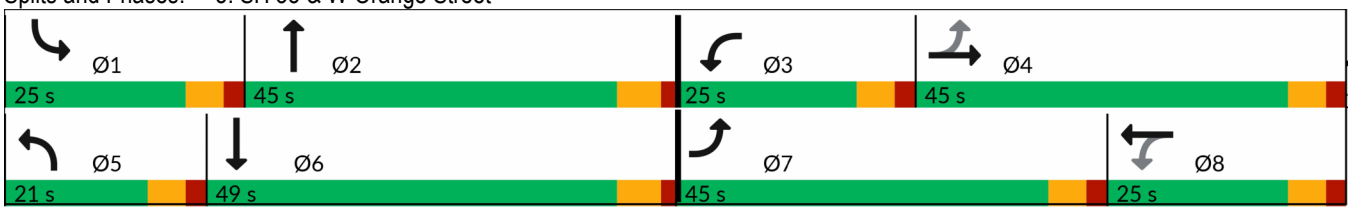
09/16/2024

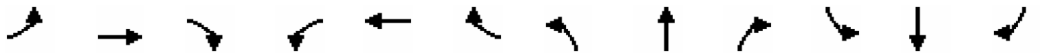
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		5.0	5.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0		25.0	25.0		20.0	45.0		25.0	45.0	
Total Split (s)	45.0	45.0		25.0	25.0		21.0	45.0		25.0	49.0	
Total Split (%)	32.1%	32.1%		17.9%	17.9%		15.0%	32.1%		17.9%	35.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	30.4	15.5		22.0	11.3		12.3	41.9		13.7	43.3	
Actuated g/C Ratio	0.29	0.15		0.21	0.11		0.12	0.39		0.13	0.41	
v/c Ratio	0.55	0.46		0.41	0.64		0.61	0.15		0.63	0.59	
Control Delay (s/veh)	35.1	20.7		32.3	35.7		59.2	13.6		57.7	27.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	35.1	20.7		32.3	35.7		59.2	13.6		57.7	27.0	
LOS	D	C		C	D		E	B		E	C	
Approach Delay (s/veh)		26.4			34.7			27.4			30.2	
Approach LOS		C			C			C			C	
90th %ile Green (s)	20.9	22.1		14.6	15.8		15.0	39.0		19.0	43.0	
90th %ile Term Code	Gap	Hold		Gap	Gap		Max	MaxR		Max	MaxR	
70th %ile Green (s)	17.4	18.1		12.4	13.1		15.0	41.8		16.2	43.0	
70th %ile Term Code	Gap	Hold		Gap	Gap		Max	Hold		Gap	MaxR	
50th %ile Green (s)	15.1	15.6		10.8	11.3		13.0	42.1		13.9	43.0	
50th %ile Term Code	Gap	Hold		Gap	Gap		Gap	Hold		Gap	MaxR	
30th %ile Green (s)	12.6	12.9		9.3	9.6		10.9	42.2		11.7	43.0	
30th %ile Term Code	Gap	Hold		Gap	Gap		Gap	Hold		Gap	MaxR	
10th %ile Green (s)	10.0	10.0		7.4	7.4		8.3	42.4		8.9	43.0	
10th %ile Term Code	Min	Min		Gap	Gap		Gap	Hold		Gap	MaxR	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 106.1
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay (s/veh): 29.8 Intersection LOS: C
Intersection Capacity Utilization 65.3% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 118.7
70th %ile Actuated Cycle: 112.5
50th %ile Actuated Cycle: 106.4
30th %ile Actuated Cycle: 100.1
10th %ile Actuated Cycle: 92.7

Splits and Phases: 5: SH 35 & W Orange Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	263	588	218	184	856	73	256	856	99	170	927	321
Future Volume (vph)	263	588	218	184	856	73	256	856	99	170	927	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	380		0	180		0	180		160
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.959			0.988			0.984			0.961	
Flt Protected	0.950			0.950	0.999		0.950			0.950		
Satd. Flow (prot)	1770	3394	0	1610	3346	0	1770	3483	0	1770	3401	0
Flt Permitted	0.950			0.950	0.999		0.950			0.950		
Satd. Flow (perm)	1770	3394	0	1610	3346	0	1770	3483	0	1770	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			5			10			38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4184			1078			2138			5584	
Travel Time (s)		95.1			24.5			48.6			126.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	286	639	237	200	930	79	278	930	108	185	1008	349
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	286	876	0	180	1029	0	278	1038	0	185	1357	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5			1		
Permitted Phases								2			6	
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
8: SH 35 & Magnoila Parkway

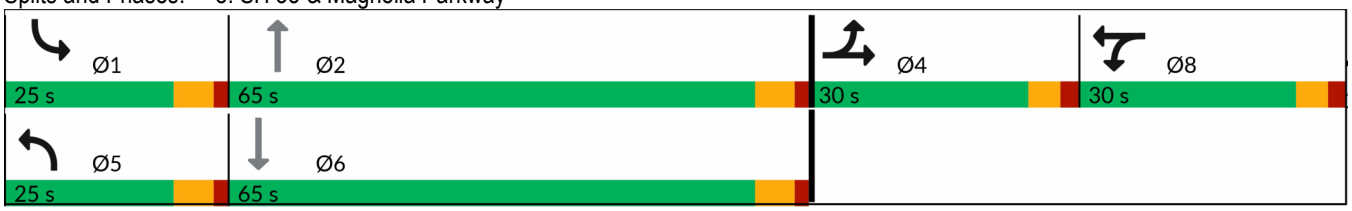
09/16/2024

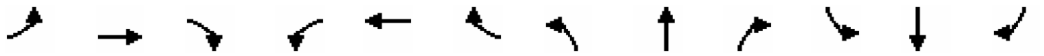
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		20.0	45.0		24.0	45.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	65.0		25.0	65.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		16.7%	43.3%		16.7%	43.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		Max	Max	
Act Effct Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.13	0.39		0.13	0.39	
v/c Ratio	0.99	1.51		0.69	1.87		1.24	0.75		0.83	1.00	
Control Delay (s/veh)	111.9	279.1		73.7	431.5		192.0	43.1		91.9	67.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	111.9	279.1		73.7	431.5		192.0	43.1		91.9	67.6	
LOS	F	F		E	F		F	D		F	E	
Approach Delay (s/veh)		237.9			378.2			74.6			70.5	
Approach LOS		F			F			E			E	
90th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
70th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
70th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
50th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
50th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
30th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
30th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
10th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
10th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.87
Intersection Signal Delay (s/veh): 179.9 Intersection LOS: F
Intersection Capacity Utilization 116.4% ICU Level of Service H
Analysis Period (min) 15
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 150
50th %ile Actuated Cycle: 150
30th %ile Actuated Cycle: 150
10th %ile Actuated Cycle: 150

Splits and Phases: 8: SH 35 & Magnoila Parkway





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	21	3	31	0	71	0	1230	44	145	1316	1
Future Volume (vph)	37	21	3	31	0	71	0	1230	44	145	1316	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.906			0.995				
Flt Protected		0.969			0.985					0.950		
Satd. Flow (prot)	0	1805	1583	0	1662	0	1863	3522	0	1770	3539	0
Flt Permitted		0.969			0.985					0.161		
Satd. Flow (perm)	0	1805	1583	0	1662	0	1863	3522	0	300	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149		149			5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		688			655			2138			2138	
Travel Time (s)		15.6			14.9			48.6			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	40	23	3	34	0	77	0	1337	48	158	1430	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	3	0	111	0	0	1385	0	158	1431	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
9: SH 35/SH35 & High School

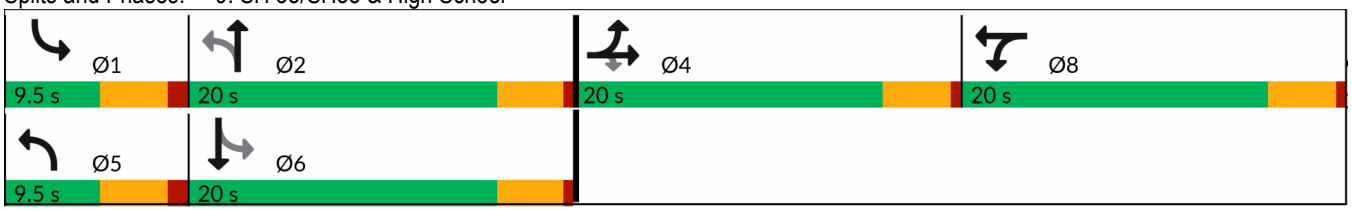
09/16/2024

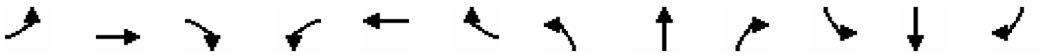
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (%)	28.8%	28.8%	28.8%	28.8%	28.8%		13.7%	28.8%		13.7%	28.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	Max		None	None	
Act Effct Green (s)		7.2	7.2		6.0			21.5		27.2	28.8	
Actuated g/C Ratio		0.16	0.16		0.13			0.47		0.59	0.63	
v/c Ratio		0.22	0.01		0.32			0.84		0.46	0.65	
Control Delay (s/veh)		21.1	0.0		5.5			28.1		13.0	11.5	
Queue Delay		0.0	0.0		0.0			0.0		0.0	0.0	
Total Delay (s/veh)		21.1	0.0		5.5			28.1		13.0	11.5	
LOS		C	A		A			C		B	B	
Approach Delay (s/veh)		20.1			5.5			28.1			11.7	
Approach LOS		C			A			C			B	
90th %ile Green (s)	9.3	9.3	9.3	7.5	7.5		0.0	16.0		5.0	25.5	
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip	MaxR		Max	Hold	
70th %ile Green (s)	7.9	7.9	7.9	5.5	5.5		0.0	16.0		5.0	25.5	
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip	MaxR		Max	Hold	
50th %ile Green (s)	7.1	7.1	7.1	5.5	5.5		0.0	16.0		5.0	25.5	
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip	MaxR		Max	Hold	
30th %ile Green (s)	0.0	0.0	0.0	5.5	5.5		0.0	16.0		5.0	25.5	
30th %ile Term Code	Skip	Skip	Skip	Gap	Gap		Skip	MaxR		Max	Hold	
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	31.0		0.0	31.0	
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	

Intersection Summary

Area Type: Other
Cycle Length: 69.5
Actuated Cycle Length: 45.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay (s/veh): 18.9 Intersection LOS: B
Intersection Capacity Utilization 66.6% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 54.3
70th %ile Actuated Cycle: 50.9
50th %ile Actuated Cycle: 50.1
30th %ile Actuated Cycle: 39
10th %ile Actuated Cycle: 35

Splits and Phases: 9: SH 35/SH35 & High School





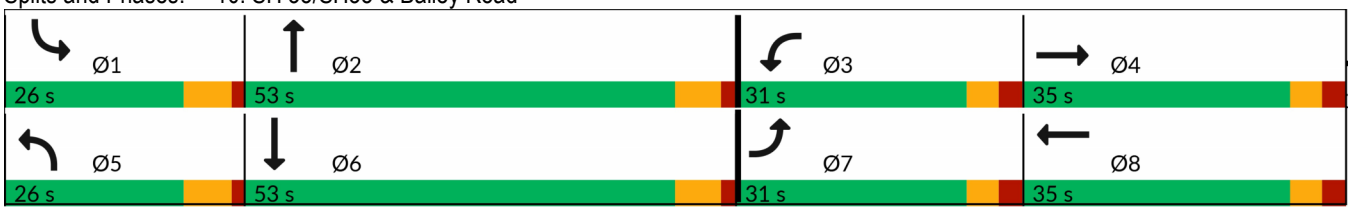
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	167	383	283	83	829	231	437	675	61	115	986	259
Future Volume (vph)	167	383	283	83	829	231	437	675	61	115	986	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		0
Storage Lanes	2		0	2		0	1		0	1		0
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.936			0.967			0.988			0.969	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3313	0	3433	3422	0	1770	3497	0	1770	3430	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3313	0	3433	3422	0	1770	3497	0	1770	3430	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			22			7			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		782			1610			6422			2138	
Travel Time (s)		17.8			36.6			146.0			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	182	416	308	90	901	251	475	734	66	125	1072	282
Shared Lane Traffic (%)												
Lane Group Flow (vph)	182	724	0	90	1152	0	475	800	0	125	1354	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		42			42			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
10: SH 35/SH35 & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		20.0	50.0		25.0	50.0	
Total Split (s)	31.0	35.0		31.0	35.0		26.0	53.0		26.0	53.0	
Total Split (%)	21.4%	24.1%		21.4%	24.1%		17.9%	36.6%		17.9%	36.6%	
Yellow Time (s)	3.5	3.5		3.5	3.5		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	12.3	32.5		8.8	29.0		19.5	51.6		14.4	46.5	
Actuated g/C Ratio	0.09	0.25		0.07	0.22		0.15	0.39		0.11	0.35	
v/c Ratio	0.57	0.81		0.39	1.50		1.83	0.59		0.65	1.11	
Control Delay (s/veh)	64.7	47.3		64.4	268.3		417.4	34.8		72.0	100.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	64.7	47.3		64.4	268.3		417.4	34.8		72.0	100.7	
LOS	E	D		E	F		F	C		E	F	
Approach Delay (s/veh)		50.8			253.5			177.3			98.2	
Approach LOS		D			F			F			F	
90th %ile Green (s)	15.8	33.5		11.3	29.0		19.5	46.5		19.5	46.5	
90th %ile Term Code	Gap	Hold		Gap	Max		Max	MaxR		Max	Max	
70th %ile Green (s)	13.7	32.9		9.8	29.0		19.5	49.2		16.8	46.5	
70th %ile Term Code	Gap	Hold		Gap	Max		Max	Hold		Gap	Max	
50th %ile Green (s)	12.3	32.5		8.8	29.0		19.5	51.5		14.5	46.5	
50th %ile Term Code	Gap	Hold		Gap	Max		Max	Hold		Gap	Max	
30th %ile Green (s)	10.9	32.0		7.9	29.0		19.5	53.6		12.4	46.5	
30th %ile Term Code	Gap	Hold		Gap	Max		Max	Hold		Gap	Max	
10th %ile Green (s)	9.0	31.5		6.5	29.0		19.5	56.7		9.3	46.5	
10th %ile Term Code	Gap	Hold		Gap	Max		Max	Hold		Gap	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 132.3			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.83			
Intersection Signal Delay (s/veh): 149.4		Intersection LOS: F	
Intersection Capacity Utilization 115.6%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 135.8			
70th %ile Actuated Cycle: 133.7			
50th %ile Actuated Cycle: 132.3			
30th %ile Actuated Cycle: 130.9			
10th %ile Actuated Cycle: 129			

Splits and Phases: 10: SH 35/SH35 & Bailey Road



Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	770	699	345	1027	824	283
Future Volume (vph)	770	699	345	1027	824	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	320		180	0
Storage Lanes		1	1		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		408				248
Link Speed (mph)	30			30	30	
Link Distance (ft)	8103			6422	2765	
Travel Time (s)	184.2			146.0	62.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	837	760	375	1116	896	308
Shared Lane Traffic (%)						
Lane Group Flow (vph)	837	760	375	1116	896	308
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	0	1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100	0	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						

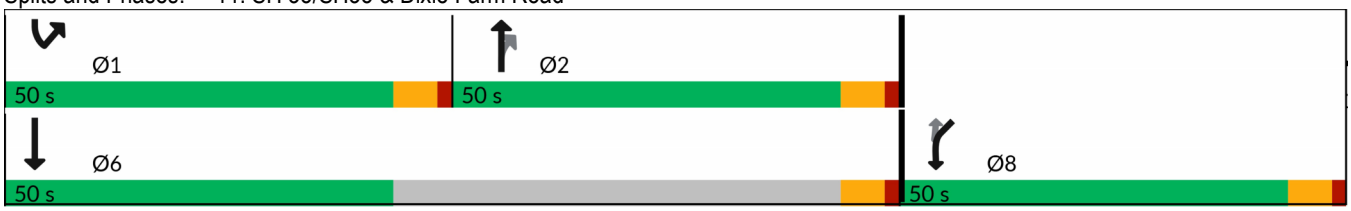
Lanes, Volumes, Timings
11: SH 35/SH35 & Dixie Farm Road

09/16/2024

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Minimum Initial (s)	15.0	15.0	5.0	15.0	5.0	5.0
Minimum Split (s)	45.0	45.0	30.0	45.0	30.0	30.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	None
Act Effct Green (s)	43.9	43.9	33.7	84.1	39.9	39.9
Actuated g/C Ratio	0.32	0.32	0.25	0.61	0.29	0.29
v/c Ratio	0.74	0.97	0.86	0.51	0.90	0.48
Control Delay (s/veh)	48.0	47.7	69.7	16.2	59.7	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.0	47.7	69.7	16.2	59.7	11.9
LOS	D	D	E	B	E	B
Approach Delay (s/veh)	47.9			29.7	47.4	
Approach LOS	D			C	D	
90th %ile Green (s)	43.5	43.5	43.5	93.5	43.5	43.5
90th %ile Term Code	MaxR	MaxR	Max	Hold	Max	Max
70th %ile Green (s)	43.5	43.5	39.9	89.9	43.5	43.5
70th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	Max
50th %ile Green (s)	43.5	43.5	34.8	84.8	43.5	43.5
50th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	Max
30th %ile Green (s)	43.5	43.5	29.8	79.8	38.7	38.7
30th %ile Term Code	MaxR	MaxR	Gap	Hold	Gap	Gap
10th %ile Green (s)	43.5	43.5	22.4	72.4	30.8	30.8
10th %ile Term Code	MaxR	MaxR	Gap	Hold	Gap	Gap

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 137.1			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 41.4		Intersection LOS: D	
Intersection Capacity Utilization 80.2%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 150			
70th %ile Actuated Cycle: 146.4			
50th %ile Actuated Cycle: 141.3			
30th %ile Actuated Cycle: 131.5			
10th %ile Actuated Cycle: 116.2			

Splits and Phases: 11: SH 35/SH35 & Dixie Farm Road



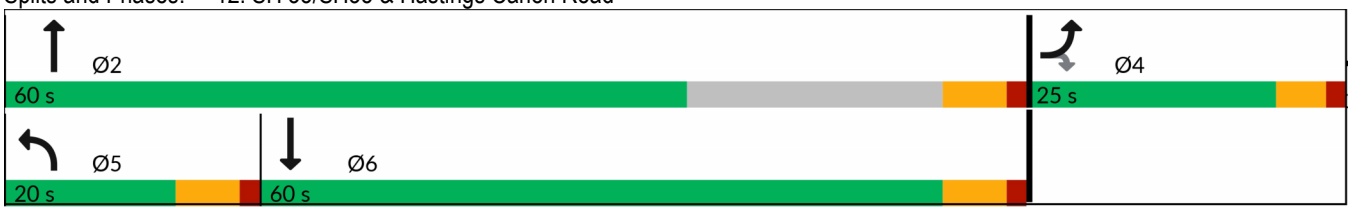


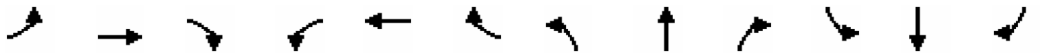
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	144	246	1348	1717	129
Future Volume (vph)	67	144	246	1348	1717	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	150	180			0
Storage Lanes	1	1	1			0
Taper Length (ft)	0		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor						
Frt		0.850			0.990	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3504	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3504	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		157			11	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1279			693	8103	
Travel Time (s)	29.1			15.8	184.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	73	157	267	1465	1866	140
Shared Lane Traffic (%)						
Lane Group Flow (vph)	73	157	267	1465	2006	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	0	1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (ft)	20	0	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	
Minimum Split (s)	25.0	25.0	20.0	60.0	60.0	
Total Split (s)	25.0	25.0	20.0	60.0	60.0	
Total Split (%)	23.8%	23.8%	19.0%	57.1%	57.1%	
Yellow Time (s)	4.0	4.0	5.0	5.0	5.0	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	6.5	6.5	6.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	Max	None	
Act Effct Green (s)	9.2	9.2	13.5	73.5	53.5	
Actuated g/C Ratio	0.10	0.10	0.14	0.78	0.56	
v/c Ratio	0.42	0.53	1.06	0.53	1.01	
Control Delay (s/veh)	47.8	13.6	114.8	5.1	45.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	47.8	13.6	114.8	5.1	45.0	
LOS	D	B	F	A	D	
Approach Delay (s/veh)	24.5			22.0	45.0	
Approach LOS	C			C	D	
90th %ile Green (s)	12.8	12.8	13.5	73.5	53.5	
90th %ile Term Code	Gap	Gap	Max	Hold	Max	
70th %ile Green (s)	10.7	10.7	13.5	73.5	53.5	
70th %ile Term Code	Gap	Gap	Max	Hold	Max	
50th %ile Green (s)	9.2	9.2	13.5	73.5	53.5	
50th %ile Term Code	Gap	Gap	Max	Hold	Max	
30th %ile Green (s)	7.9	7.9	13.5	73.5	53.5	
30th %ile Term Code	Gap	Gap	Max	Hold	Max	
10th %ile Green (s)	5.9	5.9	13.5	73.5	53.5	
10th %ile Term Code	Gap	Gap	Max	Hold	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 105	
Actuated Cycle Length: 94.8	
Natural Cycle: 125	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay (s/veh): 33.8	Intersection LOS: C
Intersection Capacity Utilization 84.8%	ICU Level of Service E
Analysis Period (min) 15	
90th %ile Actuated Cycle: 98.3	
70th %ile Actuated Cycle: 96.2	
50th %ile Actuated Cycle: 94.7	
30th %ile Actuated Cycle: 93.4	
10th %ile Actuated Cycle: 91.4	

Splits and Phases: 12: SH 35/SH35 & Hastings Canon Road





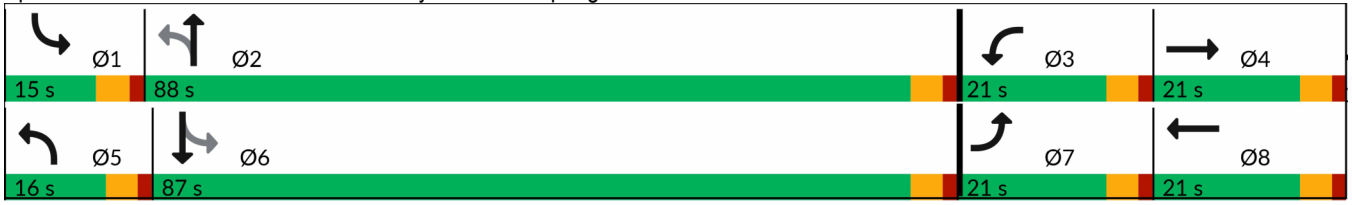
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	3	40	12	1	9	207	1184	13	19	2004	78
Future Volume (vph)	70	3	40	12	1	9	207	1184	13	19	2004	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	180		150	180		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.860			0.864			0.998			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1602	0	1770	1609	0	1770	3532	0	1770	3518	0
Flt Permitted	0.950			0.950			0.044			0.194		
Satd. Flow (perm)	1770	1602	0	1770	1609	0	82	3532	0	361	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			10			1			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1005			878			1367			830	
Travel Time (s)		22.8			20.0			31.1			18.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	76	3	43	13	1	10	225	1287	14	21	2178	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	46	0	13	11	0	225	1301	0	21	2263	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
13: Pearland Parkway & Summit Springs Lane 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		15.0	45.0		15.0	45.0	
Total Split (s)	21.0	21.0		21.0	21.0		16.0	88.0		15.0	87.0	
Total Split (%)	14.5%	14.5%		14.5%	14.5%		11.0%	60.7%		10.3%	60.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	11.0	10.9		8.1	8.1		98.9	96.1		88.8	82.9	
Actuated g/C Ratio	0.09	0.09		0.07	0.07		0.81	0.79		0.73	0.68	
v/c Ratio	0.48	0.25		0.11	0.09		1.02	0.47		0.06	0.94	
Control Delay (s/veh)	65.3	20.8		61.0	33.2		103.1	8.3		5.2	29.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	65.3	20.8		61.0	33.2		103.1	8.3		5.2	29.5	
LOS	E	C		E	C		F	A		A	C	
Approach Delay (s/veh)		48.6			48.3			22.3			29.3	
Approach LOS		D			D			C			C	
90th %ile Green (s)	15.4	15.2		8.2	8.0		11.0	86.4		6.6	82.0	
90th %ile Term Code	Gap	Hold		Gap	Min		Max	Hold		Gap	Max	
70th %ile Green (s)	12.8	12.8		8.0	8.0		11.0	86.9		6.1	82.0	
70th %ile Term Code	Gap	Hold		Min	Min		Max	Hold		Gap	Max	
50th %ile Green (s)	10.4	10.4		0.0	0.0		11.0	98.0		0.0	82.0	
50th %ile Term Code	Gap	Hold		Skip	Skip		Max	Hold		Skip	Max	
30th %ile Green (s)	8.9	8.9		0.0	0.0		11.0	98.0		0.0	82.0	
30th %ile Term Code	Gap	Hold		Skip	Skip		Max	Hold		Skip	Max	
10th %ile Green (s)	0.0	0.0		0.0	0.0		11.0	98.0		0.0	82.0	
10th %ile Term Code	Skip	Skip		Skip	Skip		Max	Hold		Skip	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 121.7			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay (s/veh): 27.3		Intersection LOS: C	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 136.4			
70th %ile Actuated Cycle: 133.8			
50th %ile Actuated Cycle: 118.4			
30th %ile Actuated Cycle: 116.9			
10th %ile Actuated Cycle: 103			

Splits and Phases: 13: Pearland Parkway & Summit Springs Lane



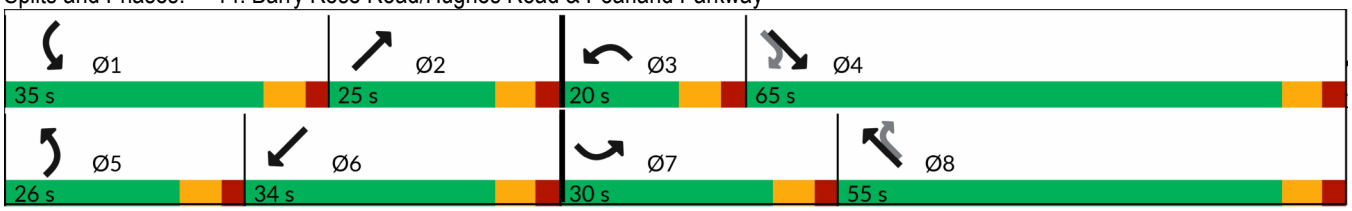
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	343	1335	258	40	962	451	201	333	38	397	332	263
Future Volume (vph)	343	1335	258	40	962	451	201	333	38	397	332	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		120	120		120	120		120	120		120
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.993	0.850		0.985			0.934	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3366	1441	1770	3486	0	1770	3306	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3366	1441	1770	3486	0	1770	3306	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			188		3	241		7			121	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		810			670			666			826	
Travel Time (s)		18.4			15.2			15.1			18.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	373	1451	280	43	1046	490	218	362	41	432	361	286
Shared Lane Traffic (%)						10%						
Lane Group Flow (vph)	373	1451	280	43	1095	441	218	403	0	432	647	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0	0	0	0	0	0	2		0	2	
Detector Template	Thru	Thru	Thru	Thru	Thru	Thru	Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	0	0	0	0	0	0	100		0	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
14: Barry Rose Road/Hughes Road & Pearland Parkway 09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	25.0		25.0	25.0	
Total Split (s)	30.0	65.0	65.0	20.0	55.0	55.0	26.0	25.0		35.0	34.0	
Total Split (%)	20.7%	44.8%	44.8%	13.8%	37.9%	37.9%	17.9%	17.2%		24.1%	23.4%	
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max		None	None	
Act Effct Green (s)	23.0	64.6	64.6	8.9	48.0	48.0	19.0	18.0		28.0	27.0	
Actuated g/C Ratio	0.16	0.45	0.45	0.06	0.33	0.33	0.13	0.12		0.19	0.19	
v/c Ratio	1.33	0.92	0.35	0.40	0.98	0.69	0.94	0.92		1.27	0.91	
Control Delay (s/veh)	217.3	49.0	10.5	75.2	70.4	24.6	108.0	88.3		187.6	64.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	217.3	49.0	10.5	75.2	70.4	24.6	108.0	88.3		187.6	64.1	
LOS	F	D	B	E	E	C	F	F		F	E	
Approach Delay (s/veh)		73.7			57.8			95.2			113.5	
Approach LOS		E			E			F			F	
90th %ile Green (s)	23.0	58.7	58.7	12.3	48.0	48.0	19.0	18.0		28.0	27.0	
90th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Max	MaxR		Max	Max	
70th %ile Green (s)	23.0	60.7	60.7	10.3	48.0	48.0	19.0	18.0		28.0	27.0	
70th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Max	MaxR		Max	Max	
50th %ile Green (s)	23.0	62.1	62.1	8.9	48.0	48.0	19.0	18.0		28.0	27.0	
50th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Max	MaxR		Max	Max	
30th %ile Green (s)	23.0	63.5	63.5	7.5	48.0	48.0	19.0	18.0		28.0	27.0	
30th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Max	MaxR		Max	Max	
10th %ile Green (s)	23.0	78.0	78.0	0.0	48.0	48.0	19.0	18.0		28.0	27.0	
10th %ile Term Code	Max	Hold	Hold	Skip	Max	Max	Max	MaxR		Max	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 145			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.33			
Intersection Signal Delay (s/veh): 79.5		Intersection LOS: E	
Intersection Capacity Utilization 106.1%		ICU Level of Service G	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 145			
70th %ile Actuated Cycle: 145			
50th %ile Actuated Cycle: 145			
30th %ile Actuated Cycle: 145			
10th %ile Actuated Cycle: 145			

Splits and Phases: 14: Barry Rose Road/Hughes Road & Pearland Parkway



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	262	7	22	38	1	22	34	1206	10	56	1486	201
Future Volume (vph)	262	7	22	38	1	22	34	1206	10	56	1486	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	200		150	120		150
Storage Lanes	0		0	0		0	2		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.989			0.945			0.999			0.982	
Flt Protected		0.957			0.970		0.950			0.950		
Satd. Flow (prot)	0	3350	0	0	3244	0	3433	3536	0	1770	3476	0
Flt Permitted		0.957			0.970		0.950			0.950		
Satd. Flow (perm)	0	3350	0	0	3244	0	3433	3536	0	1770	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			24			1			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		299			285			1148			332	
Travel Time (s)		6.8			6.5			26.1			7.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	285	8	24	41	1	24	37	1311	11	61	1615	218
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	317	0	0	66	0	37	1322	0	61	1833	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		0	0		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	20	0		20	0		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

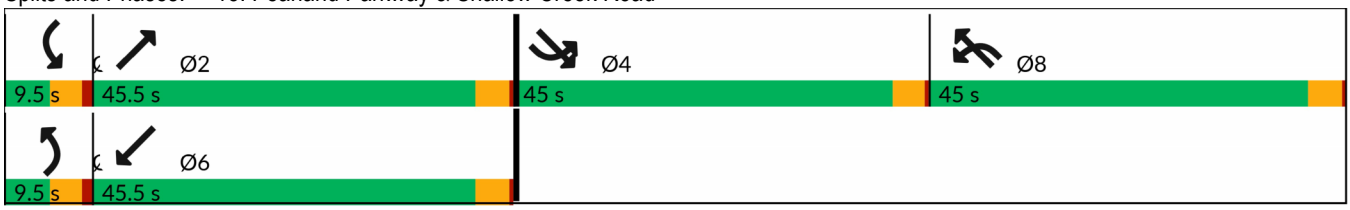


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		9.5	45.0		9.5	45.0	
Total Split (s)	45.0	45.0		45.0	45.0		9.5	45.5		9.5	45.5	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		6.6%	31.4%		6.6%	31.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)		12.8			6.6		5.0	41.8		5.0	45.9	
Actuated g/C Ratio		0.16			0.08		0.06	0.52		0.06	0.57	
v/c Ratio		1.00dl			0.23		0.17	0.72		0.55	0.92	
Control Delay (s/veh)		36.3			27.7		40.1	19.0		59.4	29.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		36.3			27.7		40.1	19.0		59.4	29.0	
LOS		D			C		D	B		E	C	
Approach Delay (s/veh)		36.3			27.7			19.5			30.0	
Approach LOS		D			C			B			C	
90th %ile Green (s)	16.3	16.3		8.1	8.1		5.0	41.5		5.0	41.5	
90th %ile Term Code	Gap	Gap		Gap	Gap		Max	MaxR		Max	Max	
70th %ile Green (s)	14.2	14.2		7.1	7.1		5.0	41.5		5.0	41.5	
70th %ile Term Code	Gap	Gap		Gap	Gap		Max	MaxR		Max	Max	
50th %ile Green (s)	12.9	12.9		6.5	6.5		5.0	41.5		5.0	41.5	
50th %ile Term Code	Gap	Gap		Gap	Gap		Max	MaxR		Max	Max	
30th %ile Green (s)	11.6	11.6		6.0	6.0		0.0	41.5		5.0	51.0	
30th %ile Term Code	Gap	Gap		Gap	Gap		Skip	MaxR		Max	Hold	
10th %ile Green (s)	9.3	9.3		0.0	0.0		0.0	41.5		5.0	51.0	
10th %ile Term Code	Gap	Gap		Skip	Skip		Skip	MaxR		Max	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 80.6			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay (s/veh): 26.6		Intersection LOS: C	
Intersection Capacity Utilization 75.3%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 87.4			
70th %ile Actuated Cycle: 84.3			
50th %ile Actuated Cycle: 82.4			
30th %ile Actuated Cycle: 80.6			
10th %ile Actuated Cycle: 68.3			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 15: Pearland Parkway & Shallow Creek Road



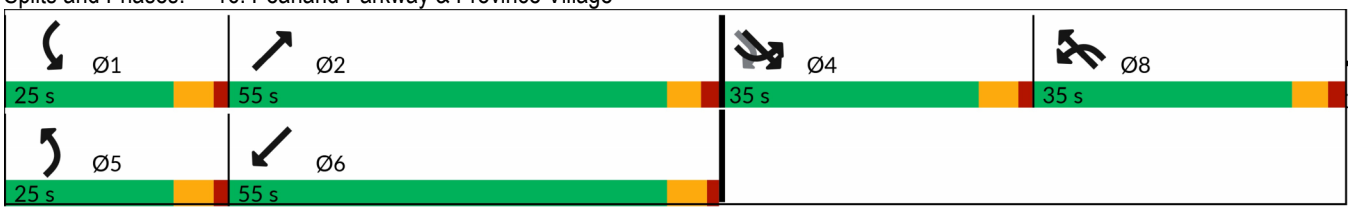
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	244	27	147	77	21	147	241	925	49	110	1374	70
Future Volume (vph)	244	27	147	77	21	147	241	925	49	110	1374	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		800	0		150	200		150	120		150
Storage Lanes	0		1	0		0	2		0	2		0
Taper Length (ft)	0			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	0.97	0.95	0.95	0.97	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.910			0.992			0.993	
Flt Protected		0.957			0.985		0.950			0.950		
Satd. Flow (prot)	0	1783	1583	0	3172	0	3433	3511	0	3433	3514	0
Flt Permitted		0.957			0.985		0.950			0.950		
Satd. Flow (perm)	0	1783	1583	0	3172	0	3433	3511	0	3433	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160		160			4			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		737			805			403			1148	
Travel Time (s)		16.8			18.3			9.2			26.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	265	29	160	84	23	160	262	1005	53	120	1493	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	294	160	0	267	0	262	1058	0	120	1569	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	0	2		0	0		1	0	
Detector Template	Left	Thru	Thru	Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	50	100		0	0		20	0	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
16: Pearland Parkway & Province Village 09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		3.0	5.0		3.0	5.0	
Minimum Split (s)	35.0	35.0	35.0	35.0	35.0		25.0	35.0		25.0	35.0	
Total Split (s)	35.0	35.0	35.0	35.0	35.0		25.0	55.0		25.0	55.0	
Total Split (%)	23.3%	23.3%	23.3%	23.3%	23.3%		16.7%	36.7%		16.7%	36.7%	
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0		4.5	4.0		4.5	4.5	
All-Red Time (s)	1.5	1.5	1.5	2.0	2.0		1.5	2.0		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	Max	Max		None	Max		None	None	
Act Effct Green (s)		26.7	26.7		29.0		15.9	54.5		10.4	49.1	
Actuated g/C Ratio		0.18	0.18		0.20		0.11	0.38		0.07	0.34	
v/c Ratio		0.89	0.38		0.35		0.69	0.80		0.49	1.32	
Control Delay (s/veh)		86.6	9.8		21.5		72.7	46.2		71.9	186.3	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		86.6	9.8		21.5		72.7	46.2		71.9	186.3	
LOS		F	A		C		E	D		E	F	
Approach Delay (s/veh)		59.5			21.5			51.4			178.2	
Approach LOS		E			C			D			F	
90th %ile Green (s)	29.0	29.0	29.0	29.0	29.0		19.0	54.4		13.6	49.0	
90th %ile Term Code	Max	Max	Max	MaxR	MaxR		Max	Hold		Gap	Max	
70th %ile Green (s)	29.0	29.0	29.0	29.0	29.0		18.4	55.6		11.8	49.0	
70th %ile Term Code	Max	Max	Max	MaxR	MaxR		Gap	Hold		Gap	Max	
50th %ile Green (s)	29.0	29.0	29.0	29.0	29.0		16.5	55.0		10.5	49.0	
50th %ile Term Code	Max	Max	Max	MaxR	MaxR		Gap	Hold		Gap	Max	
30th %ile Green (s)	26.6	26.6	26.6	29.0	29.0		14.5	54.3		9.2	49.0	
30th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR		Gap	Hold		Gap	Max	
10th %ile Green (s)	20.6	20.6	20.6	29.0	29.0		11.6	53.2		7.4	49.0	
10th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR		Gap	Hold		Gap	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 144.8			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.32			
Intersection Signal Delay (s/veh): 107.7		Intersection LOS: F	
Intersection Capacity Utilization 89.6%		ICU Level of Service E	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 150			
70th %ile Actuated Cycle: 149.4			
50th %ile Actuated Cycle: 147.5			
30th %ile Actuated Cycle: 143.1			
10th %ile Actuated Cycle: 134.2			

Splits and Phases: 16: Pearland Parkway & Province Village



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Future Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		150	150		150	120		150	450		150
Storage Lanes	1		0	1		0	1		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.95	0.95
Ped Bike Factor												
Frt		0.983			0.961			0.970			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3401	0	1770	3433	0	3433	3433	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3479	0	1770	3401	0	1770	3433	0	3433	3433	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			32			16			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1215			1637			473			570	
Travel Time (s)		27.6			37.2			10.8			13.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	147	1176	154	203	1374	486	212	633	161	409	472	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	1330	0	203	1860	0	212	794	0	409	592	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		0	2		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	100		0	100		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases												
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												

Lanes, Volumes, Timings
17: Pearland Parkway & FM 518

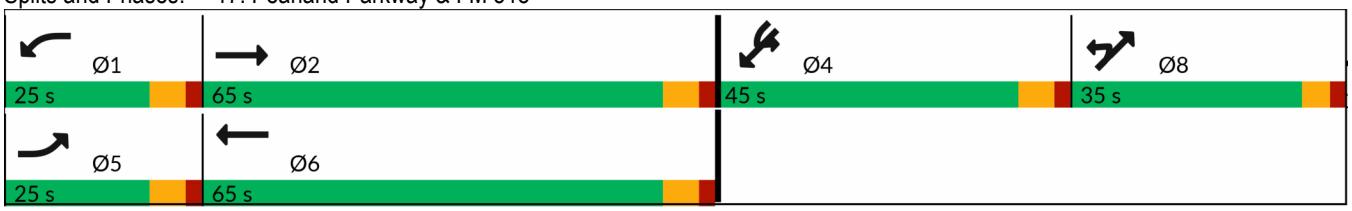
09/16/2024

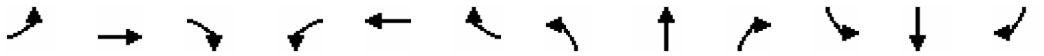
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	3.0	10.0		3.0	10.0		5.0	5.0		7.0	7.0	
Minimum Split (s)	20.0	45.0		20.0	45.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	65.0		25.0	65.0		35.0	35.0		45.0	45.0	
Total Split (%)	14.7%	38.2%		14.7%	38.2%		20.6%	20.6%		26.5%	26.5%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		5.5	5.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)	16.9	58.5		18.5	60.1		29.5	29.5		32.7	32.7	
Actuated g/C Ratio	0.10	0.36		0.11	0.37		0.18	0.18		0.20	0.20	
v/c Ratio	0.81	1.07		1.02	1.47		0.67	1.26		0.60	0.85	
Control Delay (s/veh)	103.1	95.1		138.4	252.6		75.0	181.1		63.6	73.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	103.1	95.1		138.4	252.6		75.0	181.1		63.6	73.9	
LOS	F	F		F	F		E	F		E	E	
Approach Delay (s/veh)		95.9			241.3			158.8			69.7	
Approach LOS		F			F			F			E	
90th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		38.5	38.5	
90th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Max	Max	
70th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		37.0	37.0	
70th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Gap	Gap	
50th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		33.6	33.6	
50th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Gap	Gap	
30th %ile Green (s)	16.7	58.5		18.5	60.3		29.5	29.5		30.3	30.3	
30th %ile Term Code	Gap	Max		Max	Hold		MaxR	MaxR		Gap	Gap	
10th %ile Green (s)	12.6	58.5		18.5	64.4		29.5	29.5		24.8	24.8	
10th %ile Term Code	Gap	Max		Max	Hold		MaxR	MaxR		Gap	Gap	

Intersection Summary

Area Type:	Other		
Cycle Length: 170			
Actuated Cycle Length: 164.3			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.47			
Intersection Signal Delay (s/veh): 156.6		Intersection LOS: F	
Intersection Capacity Utilization 109.1%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 170			
70th %ile Actuated Cycle: 168.5			
50th %ile Actuated Cycle: 165.1			
30th %ile Actuated Cycle: 161.8			
10th %ile Actuated Cycle: 156.3			

Splits and Phases: 17: Pearland Parkway & FM 518





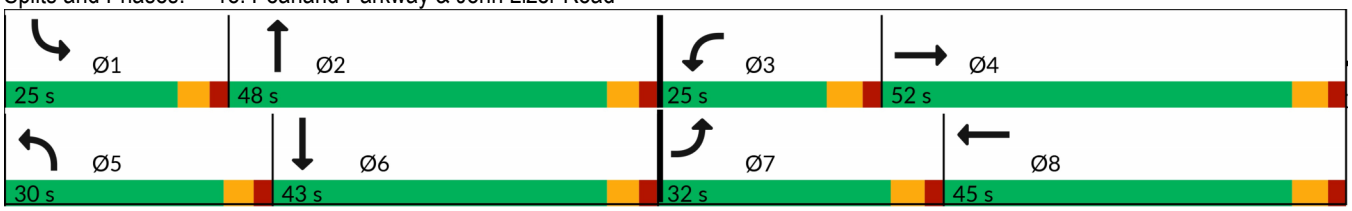
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	339	247	124	115	357	30	195	613	130	33	728	457
Future Volume (vph)	339	247	124	115	357	30	195	613	130	33	728	457
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		100	100		100	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.950			0.988			0.974			0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3362	0	1770	3497	0	1770	3447	0	1770	3334	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3362	0	1770	3497	0	1770	3447	0	1770	3334	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			6			17			88	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1007			1264			3595			815	
Travel Time (s)		22.9			28.7			81.7			18.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	368	268	135	125	388	33	212	666	141	36	791	497
Shared Lane Traffic (%)												
Lane Group Flow (vph)	368	403	0	125	421	0	212	807	0	36	1288	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			72			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		1	2		1	0		0	0	
Detector Template	Thru	Thru		Left	Thru		Left	Thru		Thru	Thru	
Leading Detector (ft)	0	100		20	100		20	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
18: Pearland Parkway & John Lizer Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	45.0		25.0	45.0		30.0	30.0		25.0	25.0	
Total Split (s)	32.0	52.0		25.0	45.0		30.0	48.0		25.0	43.0	
Total Split (%)	21.3%	34.7%		16.7%	30.0%		20.0%	32.0%		16.7%	28.7%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)	26.0	32.9		14.3	21.2		24.5	56.2		8.1	37.5	
Actuated g/C Ratio	0.20	0.25		0.11	0.16		0.19	0.42		0.06	0.28	
v/c Ratio	1.06	0.46		0.65	0.75		0.65	0.55		0.33	1.28	
Control Delay (s/veh)	114.9	37.7		73.1	60.8		60.9	31.2		68.3	169.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	114.9	37.7		73.1	60.8		60.9	31.2		68.3	169.0	
LOS	F	D		E	E		E	C		E	F	
Approach Delay (s/veh)		74.6			63.6			37.4			166.3	
Approach LOS		E			E			D			F	
90th %ile Green (s)	26.0	34.4		19.0	27.4		24.5	50.9		11.1	37.5	
90th %ile Term Code	Max	Hold		Max	Gap		MaxR	Hold		Gap	Max	
70th %ile Green (s)	26.0	33.2		16.8	24.0		24.5	52.7		9.3	37.5	
70th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Gap	Max	
50th %ile Green (s)	26.0	32.3		14.5	20.8		24.5	53.9		8.1	37.5	
50th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Gap	Max	
30th %ile Green (s)	26.0	32.3		12.3	18.6		24.5	55.0		7.0	37.5	
30th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Gap	Max	
10th %ile Green (s)	26.0	32.3		9.3	15.6		24.5	67.5		0.0	37.5	
10th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Skip	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 132.3			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.28			
Intersection Signal Delay (s/veh): 95.8		Intersection LOS: F	
Intersection Capacity Utilization 94.3%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 138.4			
70th %ile Actuated Cycle: 135			
50th %ile Actuated Cycle: 131.8			
30th %ile Actuated Cycle: 129.6			
10th %ile Actuated Cycle: 126.6			

Splits and Phases: 18: Pearland Parkway & John Lizer Road



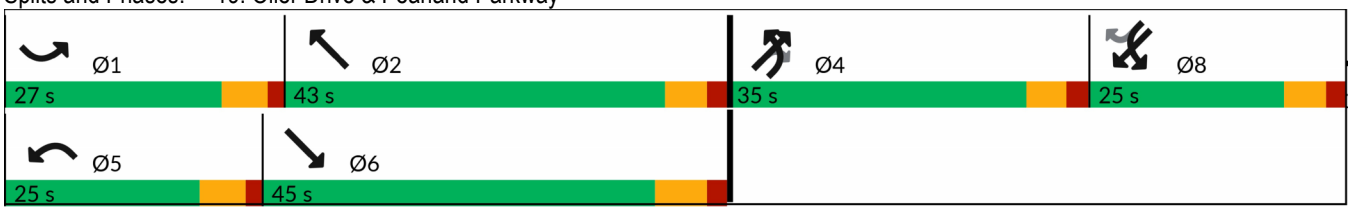
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	157	611	411	453	382	61	380	47	367	43	33	90
Future Volume (vph)	157	611	411	453	382	61	380	47	367	43	33	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	280		0	0		0
Storage Lanes	1		0	2		0	1		1	0		1
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.940			0.979				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.962			0.972	
Satd. Flow (prot)	1770	3327	0	3433	3465	0	1681	1702	1583	0	1811	1583
Flt Permitted	0.950			0.950			0.950	0.962			0.972	
Satd. Flow (perm)	1770	3327	0	3433	3465	0	1681	1702	1583	0	1811	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		127			14				399			134
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3595			633			721			931	
Travel Time (s)		81.7			14.4			16.4			21.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	171	664	447	492	415	66	413	51	399	47	36	98
Shared Lane Traffic (%)							44%					
Lane Group Flow (vph)	171	1111	0	492	481	0	231	233	399	0	83	98
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		62			62			60			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		8	8	
Permitted Phases									4			8
Detector Phase	1	6		5	2		4	4	4	8	8	8
Switch Phase												

Lanes, Volumes, Timings
19: Oiler Drive & Pearland Parkway 09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	15.0		5.0	20.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	35.0		25.0	35.0		35.0	35.0	35.0	25.0	25.0	25.0
Total Split (s)	27.0	45.0		25.0	43.0		35.0	35.0	35.0	25.0	25.0	25.0
Total Split (%)	20.8%	34.6%		19.2%	33.1%		26.9%	26.9%	26.9%	19.2%	19.2%	19.2%
Yellow Time (s)	4.5	5.0		4.5	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	2.0		1.5	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	7.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Max		None	None		None	None	None	None	None	None
Act Effct Green (s)	15.9	38.2		19.1	42.4		22.7	22.7	22.7		10.7	10.7
Actuated g/C Ratio	0.14	0.33		0.16	0.37		0.20	0.20	0.20		0.09	0.09
v/c Ratio	0.70	0.94		0.87	0.38		0.70	0.70	0.63		0.50	0.37
Control Delay (s/veh)	64.2	49.7		65.1	29.7		55.7	55.4	8.8		61.8	7.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	64.2	49.7		65.1	29.7		55.7	55.4	8.8		61.8	7.2
LOS	E	D		E	C		E	E	A		E	A
Approach Delay (s/veh)		51.7			47.6			33.9			32.2	
Approach LOS		D			D			C			C	
90th %ile Green (s)	21.0	38.0		19.0	37.0		29.0	29.0	29.0	15.3	15.3	15.3
90th %ile Term Code	Max	MaxR		Max	Hold		Max	Max	Max	Gap	Gap	Gap
70th %ile Green (s)	19.5	38.0		19.0	38.5		29.0	29.0	29.0	12.6	12.6	12.6
70th %ile Term Code	Gap	MaxR		Max	Hold		Max	Max	Max	Gap	Gap	Gap
50th %ile Green (s)	16.5	38.0		19.0	41.5		23.6	23.6	23.6	10.7	10.7	10.7
50th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Gap	Gap	Gap
30th %ile Green (s)	13.7	38.0		19.0	44.3		19.3	19.3	19.3	8.9	8.9	8.9
30th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Gap	Gap	Gap
10th %ile Green (s)	10.1	38.0		19.0	47.9		14.0	14.0	14.0	6.7	6.7	6.7
10th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Gap	Gap	Gap

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 115.8	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay (s/veh): 44.8	Intersection LOS: D
Intersection Capacity Utilization 77.2%	ICU Level of Service D
Analysis Period (min) 15	
90th %ile Actuated Cycle: 126.3	
70th %ile Actuated Cycle: 123.6	
50th %ile Actuated Cycle: 116.3	
30th %ile Actuated Cycle: 110.2	
10th %ile Actuated Cycle: 102.7	

Splits and Phases: 19: Oiler Drive & Pearland Parkway



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	628	176	96	962	955	753
Future Volume (vph)	628	176	96	962	955	753
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	250			150
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.850			0.934	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	5085	4750	0
Flt Permitted	0.950		0.117			
Satd. Flow (perm)	3433	1583	218	5085	4750	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		191			216	
Link Speed (mph)	30			30	30	
Link Distance (ft)	884			1122	1114	
Travel Time (s)	20.1			25.5	25.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	683	191	104	1046	1038	818
Shared Lane Traffic (%)						
Lane Group Flow (vph)	683	191	104	1046	1856	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	54			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	6		7	4	8	
Permitted Phases		6	4			
Detector Phase	6	6	7	4	8	
Switch Phase						

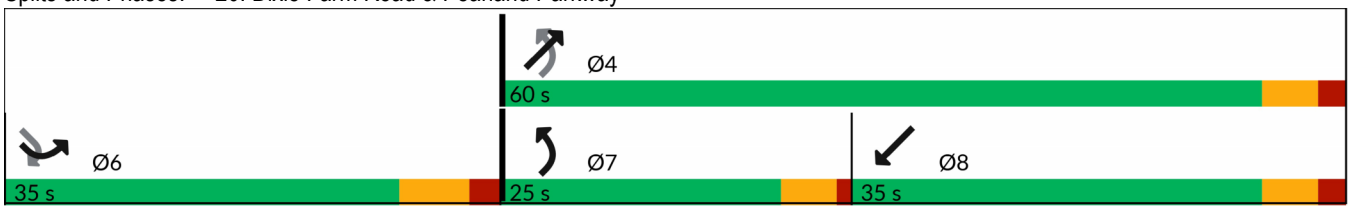


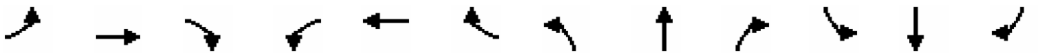
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Minimum Initial (s)	20.0	20.0	5.0	15.0	5.0	
Minimum Split (s)	35.0	35.0	25.0	35.0	35.0	
Total Split (s)	35.0	35.0	25.0	60.0	35.0	
Total Split (%)	36.8%	36.8%	26.3%	63.2%	36.8%	
Yellow Time (s)	5.0	5.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Max	Max	None	None	None	
Act Effct Green (s)	28.2	28.2	41.7	40.6	29.2	
Actuated g/C Ratio	0.34	0.34	0.51	0.50	0.36	
v/c Ratio	0.58	0.29	0.37	0.41	1.15dr	
Control Delay (s/veh)	25.3	4.7	13.9	13.4	49.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	25.3	4.7	13.9	13.4	49.9	
LOS	C	A	B	B	D	
Approach Delay (s/veh)	20.8			13.4	49.9	
Approach LOS	C			B	D	
90th %ile Green (s)	28.0	28.0	11.9	45.9	29.0	
90th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
70th %ile Green (s)	28.0	28.0	10.4	44.4	29.0	
70th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
50th %ile Green (s)	28.0	28.0	9.2	43.2	29.0	
50th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
30th %ile Green (s)	28.0	28.0	8.0	42.0	29.0	
30th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
10th %ile Green (s)	28.0	28.0	0.0	29.0	29.0	
10th %ile Term Code	MaxR	MaxR	Skip	Hold	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 95			
Actuated Cycle Length: 81.9			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay (s/veh): 32.6		Intersection LOS: C	
Intersection Capacity Utilization 73.6%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 86.9			
70th %ile Actuated Cycle: 85.4			
50th %ile Actuated Cycle: 84.2			
30th %ile Actuated Cycle: 83			
10th %ile Actuated Cycle: 70			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 20: Dixie Farm Road & Pearland Parkway





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	835	98	19	918	98	67	25	19	176	65	170
Future Volume (vph)	136	835	98	19	918	98	67	25	19	176	65	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	100		0	100		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.984			0.985			0.934			0.892	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3483	0	1770	3486	0	1770	3306	0	1770	3157	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3483	0	1770	3486	0	1770	3306	0	1770	3157	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			13			21			185	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		930			5111			1029			1098	
Travel Time (s)		21.1			116.2			23.4			25.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	148	908	107	21	998	107	73	27	21	191	71	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	1015	0	21	1105	0	73	48	0	191	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

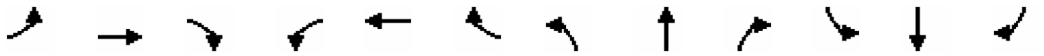
Lanes, Volumes, Timings
21: Smith Ranch Road Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	14.0	38.4		9.6	34.0		13.8	25.9		16.1	28.2	
Total Split (%)	15.6%	42.7%		10.7%	37.8%		15.3%	28.8%		17.9%	31.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	9.4	39.6		5.1	29.5		8.2	21.4		11.4	26.7	
Actuated g/C Ratio	0.10	0.44		0.06	0.33		0.09	0.24		0.13	0.30	
v/c Ratio	0.80	0.66		0.21	0.96		0.45	0.06		0.85	0.24	
Control Delay (s/veh)	70.9	22.9		45.7	48.3		47.7	17.8		71.0	8.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	70.9	22.9		45.7	48.3		47.7	17.8		71.0	8.8	
LOS	E	C		D	D		D	B		E	A	
Approach Delay (s/veh)		29.0			48.2			35.8			35.4	
Approach LOS		C			D			D			D	
90th %ile Green (s)	9.5	33.9		5.1	29.5		9.3	21.4		11.6	23.7	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	9.5	33.9		5.1	29.5		9.3	21.4		11.6	23.7	
70th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
50th %ile Green (s)	9.5	43.5		0.0	29.5		9.0	21.4		11.6	24.0	
50th %ile Term Code	Max	Hold		Skip	Max		Gap	MaxR		Max	Hold	
30th %ile Green (s)	9.5	43.5		0.0	29.5		7.7	21.4		11.6	25.3	
30th %ile Term Code	Max	Hold		Skip	Max		Gap	MaxR		Max	Hold	
10th %ile Green (s)	8.9	42.9		0.0	29.5		0.0	21.4		10.7	36.6	
10th %ile Term Code	Gap	Hold		Skip	Max		Skip	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay (s/veh): 37.9		Intersection LOS: D	
Intersection Capacity Utilization 64.9%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 90			
70th %ile Actuated Cycle: 90			
50th %ile Actuated Cycle: 90			
30th %ile Actuated Cycle: 90			
10th %ile Actuated Cycle: 88.5			

Splits and Phases: 21: Smith Ranch Road Road & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	796	4	7	765	92	0	3	6	169	4	130
Future Volume (vph)	87	796	4	7	765	92	0	3	6	169	4	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	40		0	350		0	80		150	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.999			0.984			0.895			0.858	0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	3536	0	1770	3483	0	1863	3168	0	1770	2909	1441
Flt Permitted	0.166			0.217						0.604		
Satd. Flow (perm)	309	3536	0	404	3483	0	1863	3168	0	1125	2909	1441
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			20			279			396	396
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5111			6249			1160			437	
Travel Time (s)		116.2			142.0			26.4			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	95	865	4	8	832	100	0	3	7	184	4	141
Shared Lane Traffic (%)												50%
Lane Group Flow (vph)	95	869	0	8	932	0	0	10	0	184	75	70
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												

Lanes, Volumes, Timings
22: CR 90 & Bailey Road

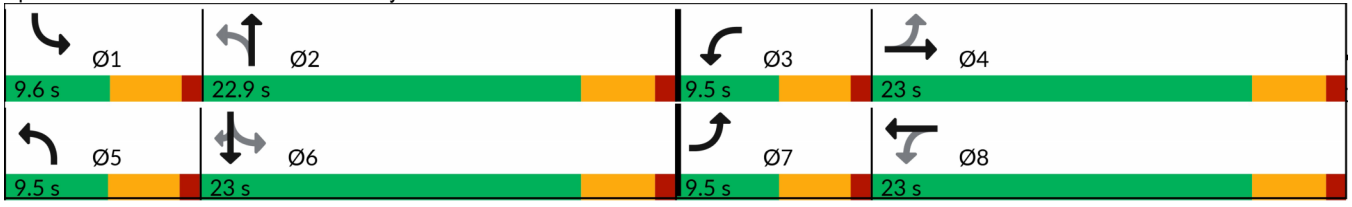
09/16/2024

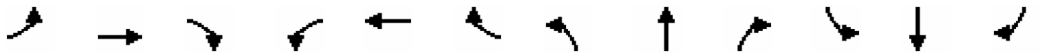
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	9.5	23.0		9.5	23.0		9.5	22.9		9.6	23.0	23.0
Total Split (%)	14.6%	35.4%		14.6%	35.4%		14.6%	35.2%		14.8%	35.4%	35.4%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max		None	Max	Max
Act Effct Green (s)	25.0	24.1		22.4	18.5			18.5		28.1	28.1	28.1
Actuated g/C Ratio	0.40	0.38		0.35	0.29			0.29		0.45	0.45	0.45
v/c Ratio	0.40	0.64		0.03	0.90			0.01		0.33	0.05	0.08
Control Delay (s/veh)	16.5	20.1		11.1	35.5			0.0		13.6	0.1	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Total Delay (s/veh)	16.5	20.1		11.1	35.5			0.0		13.6	0.1	0.2
LOS	B	C		B	D			A		B	A	A
Approach Delay (s/veh)		19.8			35.3						7.7	
Approach LOS		B			D						A	
90th %ile Green (s)	5.0	18.5		5.0	18.5		0.0	18.4		5.1	28.0	28.0
90th %ile Term Code	Max	Max		Max	Max		Skip	MaxR		Max	Hold	Hold
70th %ile Green (s)	5.0	28.0		0.0	18.5		0.0	18.4		5.1	28.0	28.0
70th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
50th %ile Green (s)	5.0	28.0		0.0	18.5		0.0	18.4		5.1	28.0	28.0
50th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
30th %ile Green (s)	5.0	28.0		0.0	18.5		0.0	18.4		5.1	28.0	28.0
30th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
10th %ile Green (s)	0.0	18.3		0.0	18.3		0.0	18.4		5.1	28.0	28.0
10th %ile Term Code	Skip	Hold		Skip	Gap		Skip	MaxR		Max	Hold	Hold

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 63.1
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay (s/veh): 24.4 Intersection LOS: C
Intersection Capacity Utilization 56.2% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 65
70th %ile Actuated Cycle: 65
50th %ile Actuated Cycle: 65
30th %ile Actuated Cycle: 65
10th %ile Actuated Cycle: 55.3

Splits and Phases: 22: CR 90 & Bailey Road





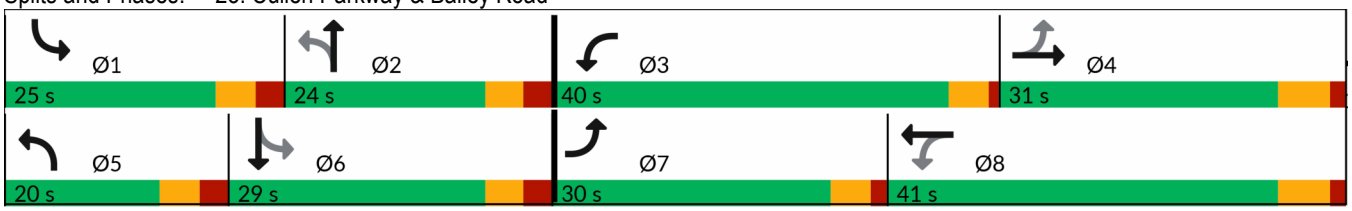
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	798	55	93	796	74	33	41	47	126	142	86
Future Volume (vph)	77	798	55	93	796	74	33	41	47	126	142	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	300		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.990			0.987			0.920			0.944	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3504	0	1770	3493	0	1770	3256	0	1770	3341	0
Flt Permitted	0.135			0.154			0.599			0.541		
Satd. Flow (perm)	251	3504	0	287	3493	0	1116	3256	0	1008	3341	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			8			51			93	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		6249			5290			1720			1280	
Travel Time (s)		142.0			120.2			39.1			29.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	84	867	60	101	865	80	36	45	51	137	154	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	927	0	101	945	0	36	96	0	137	247	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

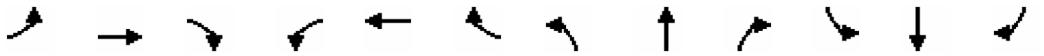
Lanes, Volumes, Timings
23: Cullen Parkway & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	30.0		40.0	40.0		20.0	24.0		25.0	25.0	
Total Split (s)	30.0	31.0		40.0	41.0		20.0	24.0		25.0	29.0	
Total Split (%)	25.0%	25.8%		33.3%	34.2%		16.7%	20.0%		20.8%	24.2%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.0	1.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		4.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	40.3	32.6		40.3	32.1		25.5	18.7		34.5	27.8	
Actuated g/C Ratio	0.45	0.36		0.45	0.36		0.28	0.21		0.38	0.31	
v/c Ratio	0.33	0.73		0.38	0.76		0.10	0.13		0.29	0.23	
Control Delay (s/veh)	16.1	29.7		16.7	30.9		21.0	18.8		22.1	18.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	16.1	29.7		16.7	30.9		21.0	18.8		22.1	18.2	
LOS	B	C		B	C		C	B		C	B	
Approach Delay (s/veh)		28.6			29.5			19.4			19.6	
Approach LOS		C			C			B			B	
90th %ile Green (s)	11.0	35.8		10.7	35.0		8.4	18.0		14.2	23.8	
90th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	9.3	35.6		9.2	35.0		7.4	18.5		11.9	23.0	
70th %ile Term Code	Gap	Hold		Gap	Max		Gap	Hold		Gap	MaxR	
50th %ile Green (s)	8.3	35.6		8.2	35.0		6.7	19.2		10.5	23.0	
50th %ile Term Code	Gap	Hold		Gap	Max		Gap	Hold		Gap	MaxR	
30th %ile Green (s)	7.3	30.7		7.3	30.2		0.0	18.0		9.1	33.1	
30th %ile Term Code	Gap	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	25.0		0.0	25.0		0.0	18.0		7.0	31.0	
10th %ile Term Code	Skip	Max		Skip	Hold		Skip	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 90.1			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 27.2		Intersection LOS: C	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 101.2			
70th %ile Actuated Cycle: 97.7			
50th %ile Actuated Cycle: 96			
30th %ile Actuated Cycle: 87.6			
10th %ile Actuated Cycle: 68			

Splits and Phases: 23: Cullen Parkway & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	705	133	228	721	145	121	385	243	182	487	169
Future Volume (vph)	126	705	133	228	721	145	121	385	243	182	487	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	220		0	330		330	300		300
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.976			0.975			0.942			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3451	0	1770	3334	0	1770	3401	0
Flt Permitted	0.153			0.133			0.201			0.162		
Satd. Flow (perm)	285	3454	0	248	3451	0	374	3334	0	302	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			20			114			39	
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		5290			5252			1738			1472	
Travel Time (s)		80.2			79.6			21.5			18.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	137	766	145	248	784	158	132	418	264	198	529	184
Shared Lane Traffic (%)												
Lane Group Flow (vph)	137	911	0	248	942	0	132	682	0	198	713	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
24: Manvel Road Road & Bailey Road

09/16/2024

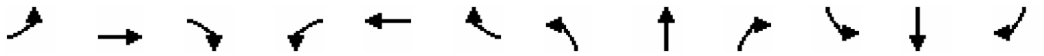
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	32.0		25.0	32.0		25.0	28.0		25.0	28.0	
Total Split (%)	22.7%	29.1%		22.7%	29.1%		22.7%	25.5%		22.7%	25.5%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	37.2	26.1		44.9	30.0		33.3	22.1		38.6	24.8	
Actuated g/C Ratio	0.38	0.27		0.46	0.31		0.34	0.23		0.40	0.26	
v/c Ratio	0.52	0.97		0.74	0.87		0.48	0.81		0.63	0.80	
Control Delay (s/veh)	24.3	58.4		34.0	42.1		24.9	39.0		28.8	40.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.3	58.4		34.0	42.1		24.9	39.0		28.8	40.6	
LOS	C	E		C	D		C	D		C	D	
Approach Delay (s/veh)		53.9			40.4			36.7			38.0	
Approach LOS		D			D			D			D	
90th %ile Green (s)	14.5	26.0		20.0	31.5		14.2	22.0		18.2	26.0	
90th %ile Term Code	Gap	Max		Max	Hold		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	11.4	26.0		16.3	30.9		11.8	22.0		15.0	25.2	
70th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	9.9	26.0		13.7	29.8		10.1	22.0		12.7	24.6	
50th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	8.5	26.0		11.7	29.2		8.6	22.0		10.7	24.1	
30th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	6.8	26.0		9.2	28.4		6.9	22.0		8.4	23.5	
10th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 97.2
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay (s/veh): 42.7 Intersection LOS: D
Intersection Capacity Utilization 83.2% ICU Level of Service E
Analysis Period (min) 15
90th %ile Actuated Cycle: 108.2
70th %ile Actuated Cycle: 101.3
50th %ile Actuated Cycle: 96.4
30th %ile Actuated Cycle: 92.4
10th %ile Actuated Cycle: 87.6

Splits and Phases: 24: Manvel Road Road & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	981	27	22	987	187	15	21	25	155	68	99
Future Volume (vph)	77	981	27	22	987	187	15	21	25	155	68	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.996			0.976			0.919			0.911	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3525	0	1770	3454	0	1770	3253	0	1770	3224	0
Flt Permitted	0.088			0.150			0.637			0.591		
Satd. Flow (perm)	164	3525	0	279	3454	0	1187	3253	0	1101	3224	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			19			27			108	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5252			5253			1557			1503	
Travel Time (s)		119.4			119.4			35.4			34.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	84	1066	29	24	1073	203	16	23	27	168	74	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	1095	0	24	1276	0	16	50	0	168	182	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

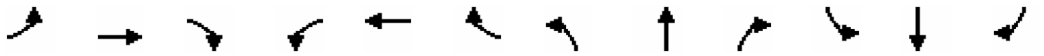
Lanes, Volumes, Timings
25: Harkey Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	45.0		25.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	20.8%	37.5%		20.8%	37.5%		20.8%	20.8%		20.8%	20.8%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	50.2	45.5		45.2	39.3		26.3	19.1		37.1	31.7	
Actuated g/C Ratio	0.51	0.46		0.46	0.40		0.27	0.19		0.38	0.32	
v/c Ratio	0.38	0.67		0.11	0.92		0.05	0.08		0.34	0.16	
Control Delay (s/veh)	17.5	24.4		13.4	40.5		21.5	20.7		24.0	12.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	17.5	24.4		13.4	40.5		21.5	20.7		24.0	12.6	
LOS	B	C		B	D		C	C		C	B	
Approach Delay (s/veh)		23.9			40.0			20.9			18.0	
Approach LOS		C			D			C			B	
90th %ile Green (s)	10.6	42.4		7.2	39.0		7.2	19.0		16.6	28.4	
90th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	8.9	41.4		6.5	39.0		6.5	19.0		13.8	26.3	
70th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	8.5	52.5		0.0	39.0		0.0	19.0		12.0	36.0	
50th %ile Term Code	Gap	Hold		Skip	Max		Skip	MaxR		Gap	Hold	
30th %ile Green (s)	7.6	51.6		0.0	39.0		0.0	19.0		10.4	34.4	
30th %ile Term Code	Gap	Hold		Skip	Max		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	39.0		0.0	39.0		0.0	19.0		7.7	31.7	
10th %ile Term Code	Skip	Hold		Skip	Max		Skip	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.2			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay (s/veh): 30.3		Intersection LOS: C	
Intersection Capacity Utilization 66.9%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 107.2			
70th %ile Actuated Cycle: 102.7			
50th %ile Actuated Cycle: 100.5			
30th %ile Actuated Cycle: 98			
10th %ile Actuated Cycle: 82.7			

Splits and Phases: 25: Harkey Road & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	989	34	31	981	118	10	19	15	84	36	154
Future Volume (vph)	142	989	34	31	981	118	10	19	15	84	36	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	330		0	330		330	150		0	150		150
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.995			0.998	0.850		0.935			0.878	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3522	0	1770	3383	1441	1770	3309	0	1770	3107	0
Flt Permitted	0.110			0.142			0.623			0.597		
Satd. Flow (perm)	205	3522	0	265	3383	1441	1160	3309	0	1112	3107	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			1	129		16			167	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5253			2652			1736			277	
Travel Time (s)		119.4			60.3			39.5			6.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	154	1075	37	34	1066	128	11	21	16	91	39	167
Shared Lane Traffic (%)						10%						
Lane Group Flow (vph)	154	1112	0	34	1079	115	11	37	0	91	206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												

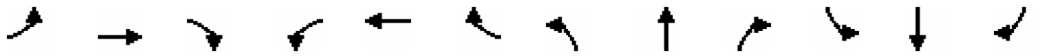
Lanes, Volumes, Timings
26: McLean Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (s)	25.0	35.0		25.0	35.0	35.0	25.0	25.0		25.0	25.0	
Total Split (%)	22.7%	31.8%		22.7%	31.8%	31.8%	22.7%	22.7%		22.7%	22.7%	
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Act Effct Green (s)	45.3	37.9		36.7	29.3	29.3	24.8	19.2		31.0	27.9	
Actuated g/C Ratio	0.52	0.44		0.42	0.34	0.34	0.29	0.22		0.36	0.32	
v/c Ratio	0.53	0.72		0.15	0.95	0.20	0.03	0.05		0.20	0.19	
Control Delay (s/veh)	20.2	26.0		13.6	47.0	4.7	18.7	20.3		20.0	6.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.2	26.0		13.6	47.0	4.7	18.7	20.3		20.0	6.9	
LOS	C	C		B	D	A	B	C		B	A	
Approach Delay (s/veh)		25.3			42.1			19.9			10.9	
Approach LOS		C			D			B			B	
90th %ile Green (s)	14.2	35.6		7.6	29.0	29.0	6.7	19.0		11.5	23.8	
90th %ile Term Code	Gap	Hold		Gap	Max	Max	Gap	MaxR		Gap	Hold	
70th %ile Green (s)	11.5	33.7		6.8	29.0	29.0	0.0	19.0		9.6	33.6	
70th %ile Term Code	Gap	Hold		Gap	Max	Max	Skip	MaxR		Gap	Hold	
50th %ile Green (s)	10.0	32.7		6.3	29.0	29.0	0.0	19.0		8.4	32.4	
50th %ile Term Code	Gap	Hold		Gap	Max	Max	Skip	MaxR		Gap	Hold	
30th %ile Green (s)	9.4	43.4		0.0	29.0	29.0	0.0	19.0		7.4	31.4	
30th %ile Term Code	Gap	Hold		Skip	Max	Max	Skip	MaxR		Gap	Hold	
10th %ile Green (s)	7.0	41.0		0.0	29.0	29.0	0.0	19.0		0.0	19.0	
10th %ile Term Code	Gap	Hold		Skip	Max	Max	Skip	MaxR		Skip	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 86.8			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay (s/veh): 31.0		Intersection LOS: C	
Intersection Capacity Utilization 62.9%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 95.7			
70th %ile Actuated Cycle: 91.1			
50th %ile Actuated Cycle: 88.4			
30th %ile Actuated Cycle: 86.8			
10th %ile Actuated Cycle: 72			

Splits and Phases: 26: McLean Road & Bailey Road





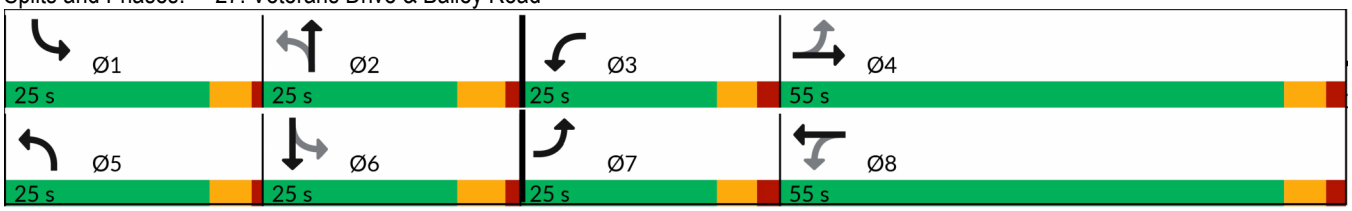
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	690	123	241	1098	142	108	112	151	56	240	127
Future Volume (vph)	73	690	123	241	1098	142	108	112	151	56	240	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		180	150		150	180		180	250		180
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.977			0.983			0.914			0.948	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3458	0	1770	3479	0	1770	3235	0	1770	3355	0
Flt Permitted	0.092			0.167			0.300			0.576		
Satd. Flow (perm)	171	3458	0	311	3479	0	559	3235	0	1073	3355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			12			164			62	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2652			5774			5367			662	
Travel Time (s)		60.3			131.2			122.0			15.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	79	750	134	262	1193	154	117	122	164	61	261	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	884	0	262	1347	0	117	286	0	61	399	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

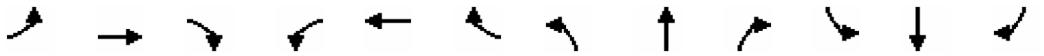
Lanes, Volumes, Timings
27: Veterans Drive & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	12.0		3.0	12.0		3.0	10.0		3.0	12.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	55.0		25.0	55.0		25.0	25.0		25.0	25.0	
Total Split (%)	19.2%	42.3%		19.2%	42.3%		19.2%	19.2%		19.2%	19.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	50.2	42.0		61.3	50.3		35.0	24.6		28.3	19.2	
Actuated g/C Ratio	0.46	0.38		0.56	0.46		0.32	0.23		0.26	0.18	
v/c Ratio	0.40	0.66		0.73	0.84		0.39	0.33		0.18	0.62	
Control Delay (s/veh)	20.0	30.6		26.8	32.8		31.5	18.0		28.8	41.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	20.0	30.6		26.8	32.8		31.5	18.0		28.8	41.4	
LOS	C	C		C	C		C	B		C	D	
Approach Delay (s/veh)		29.7			31.8			21.9			39.7	
Approach LOS		C			C			C			D	
90th %ile Green (s)	11.1	46.1		19.0	54.0		16.1	23.9		11.2	19.0	
90th %ile Term Code	Gap	Gap		Max	Hold		Gap	Hold		Gap	MaxR	
70th %ile Green (s)	8.9	42.2		15.7	49.0		12.7	22.5		9.2	19.0	
70th %ile Term Code	Gap	Hold		Gap	Max		Gap	Hold		Gap	MaxR	
50th %ile Green (s)	8.2	43.6		13.6	49.0		10.9	21.8		8.1	19.0	
50th %ile Term Code	Gap	Hold		Gap	Max		Gap	Hold		Gap	MaxR	
30th %ile Green (s)	7.4	44.6		11.8	49.0		9.4	21.3		7.1	19.0	
30th %ile Term Code	Gap	Hold		Gap	Max		Gap	Hold		Gap	MaxR	
10th %ile Green (s)	0.0	33.5		9.5	49.0		7.3	31.3		0.0	19.0	
10th %ile Term Code	Skip	Hold		Gap	Max		Gap	Hold		Skip	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 109.2			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 31.1		Intersection LOS: C	
Intersection Capacity Utilization 74.8%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 123.2			
70th %ile Actuated Cycle: 112.6			
50th %ile Actuated Cycle: 110.1			
30th %ile Actuated Cycle: 107.8			
10th %ile Actuated Cycle: 92.3			

Splits and Phases: 27: Veterans Drive & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	691	139	206	699	158	136	105	104	87	92	55
Future Volume (vph)	65	691	139	206	699	158	136	105	104	87	92	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	400		150	220		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.975			0.972			0.925			0.944	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3451	0	1770	3440	0	1770	3274	0	1770	3341	0
Flt Permitted	0.171			0.093			0.607			0.610		
Satd. Flow (perm)	319	3451	0	173	3440	0	1131	3274	0	1136	3341	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			17			113			60	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2764			1396			1102			1362	
Travel Time (s)		62.8			31.7			25.0			31.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	71	751	151	224	760	172	148	114	113	95	100	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	902	0	224	932	0	148	227	0	95	160	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
28: Old Alvin Rd & McHard Road

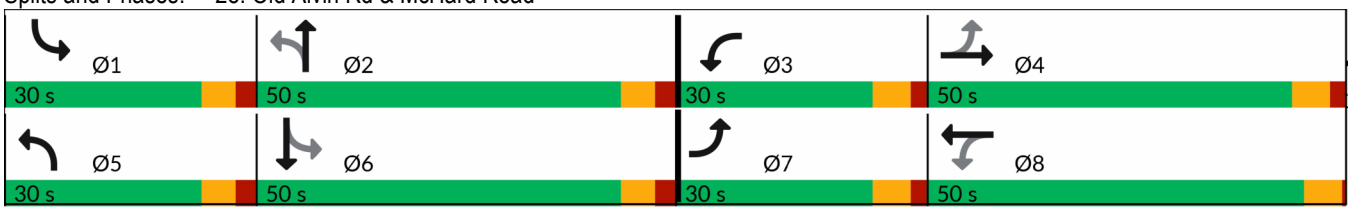
09/16/2024

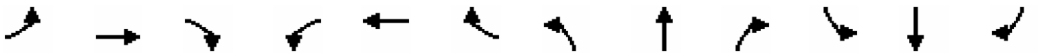
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	20.0	35.0		20.0	35.0		20.0	22.5		20.0	22.5	
Total Split (s)	30.0	50.0		30.0	50.0		30.0	50.0		30.0	50.0	
Total Split (%)	18.8%	31.3%		18.8%	31.3%		18.8%	31.3%		18.8%	31.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	0.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	5.0		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	50.2	41.6		65.6	52.2		56.8	43.7		51.0	40.8	
Actuated g/C Ratio	0.36	0.30		0.47	0.37		0.41	0.31		0.37	0.29	
v/c Ratio	0.35	0.87		0.79	0.72		0.28	0.21		0.21	0.16	
Control Delay (s/veh)	26.4	56.1		52.4	40.3		27.3	19.0		26.7	24.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	26.4	56.1		52.4	40.3		27.3	19.0		26.7	24.8	
LOS	C	E		D	D		C	B		C	C	
Approach Delay (s/veh)		53.9			42.7			22.3			25.5	
Approach LOS		D			D			C			C	
90th %ile Green (s)	11.4	43.5		23.5	57.1		17.9	43.5		13.7	39.3	
90th %ile Term Code	Gap	Max		Max	Hold		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	9.6	43.5		21.9	57.3		15.1	43.5		11.7	40.1	
70th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	8.6	43.5		18.3	54.7		13.2	43.5		10.2	40.5	
50th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	7.6	42.7		14.9	51.5		11.2	43.5		8.8	41.1	
30th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	6.3	34.7		11.4	41.3		8.7	43.5		7.0	41.8	
10th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 160
Actuated Cycle Length: 139.4
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay (s/veh): 42.3 Intersection LOS: D
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 150.2
70th %ile Actuated Cycle: 146.6
50th %ile Actuated Cycle: 141.5
30th %ile Actuated Cycle: 135.9
10th %ile Actuated Cycle: 122.6

Splits and Phases: 28: Old Alvin Rd & McHard Road





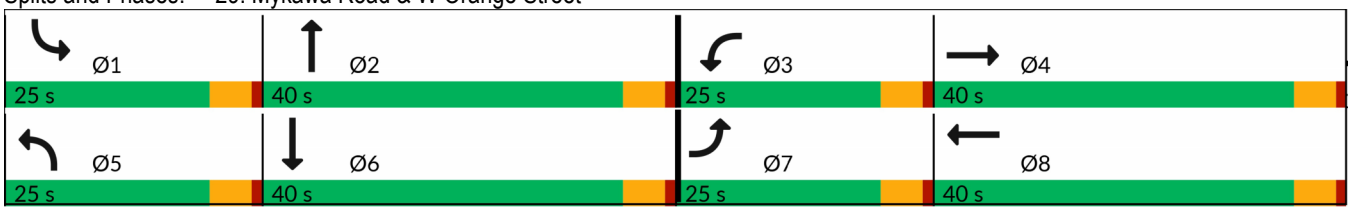
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	160	10	40	151	56	12	222	37	111	709	93
Future Volume (vph)	41	160	10	40	151	56	12	222	37	111	709	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	80		0	80		0	0		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.991			0.959			0.979			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3507	0	1770	3394	0	1770	1824	0	1770	3479	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3507	0	1770	3394	0	1770	1824	0	1770	3479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			41			6			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		647			2722			1670			4183	
Travel Time (s)		14.7			61.9			38.0			95.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	45	174	11	43	164	61	13	241	40	121	771	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	185	0	43	225	0	13	281	0	121	872	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

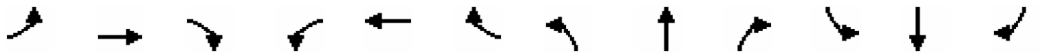
Lanes, Volumes, Timings
29: Mykawa Road & W Orange Street 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (%)	19.2%	30.8%		19.2%	30.8%		19.2%	30.8%		19.2%	30.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	7.7	11.2		7.6	11.1		6.3	35.7		11.1	49.7	
Actuated g/C Ratio	0.10	0.14		0.09	0.14		0.08	0.44		0.14	0.62	
v/c Ratio	0.27	0.38		0.26	0.45		0.09	0.35		0.50	0.41	
Control Delay (s/veh)	41.1	35.2		41.1	30.9		40.8	18.6		41.4	10.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	41.1	35.2		41.1	30.9		40.8	18.6		41.4	10.7	
LOS	D	D		D	C		D	B		D	B	
Approach Delay (s/veh)		36.4			32.5			19.6			14.5	
Approach LOS		D			C			B			B	
90th %ile Green (s)	10.3	13.8		10.2	13.7		7.5	35.0		15.8	43.3	
90th %ile Term Code	Gap	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	8.7	11.6		8.5	11.4		0.0	35.0		12.9	52.9	
70th %ile Term Code	Gap	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
50th %ile Green (s)	7.6	10.2		7.5	10.1		0.0	35.0		11.1	51.1	
50th %ile Term Code	Gap	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
30th %ile Green (s)	0.0	10.0		0.0	10.0		0.0	35.0		9.5	49.5	
30th %ile Term Code	Skip	Min		Skip	Min		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	10.0		0.0	10.0		0.0	35.0		7.2	47.2	
10th %ile Term Code	Skip	Min		Skip	Min		Skip	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 80.7			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay (s/veh): 20.8		Intersection LOS: C	
Intersection Capacity Utilization 55.9%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 94.8			
70th %ile Actuated Cycle: 88			
50th %ile Actuated Cycle: 83.8			
30th %ile Actuated Cycle: 69.5			
10th %ile Actuated Cycle: 67.2			

Splits and Phases: 29: Mykawa Road & W Orange Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	641	84	198	998	176	58	262	185	317	539	123
Future Volume (vph)	73	641	84	198	998	176	58	262	185	317	539	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	180		150	150		0	180		40
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.983			0.978				0.850		0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3461	0	1770	1863	1583	1770	3440	0
Flt Permitted	0.127			0.174			0.347			0.191		
Satd. Flow (perm)	237	3479	0	324	3461	0	646	1863	1583	356	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			27				230		31	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1942			1569			4183			883	
Travel Time (s)		44.1			35.7			71.3			15.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	79	697	91	215	1085	191	63	285	201	345	586	134
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	788	0	215	1276	0	63	285	201	345	720	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	0	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	0	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												

Lanes, Volumes, Timings
30: Mykawa Road & McHard Road

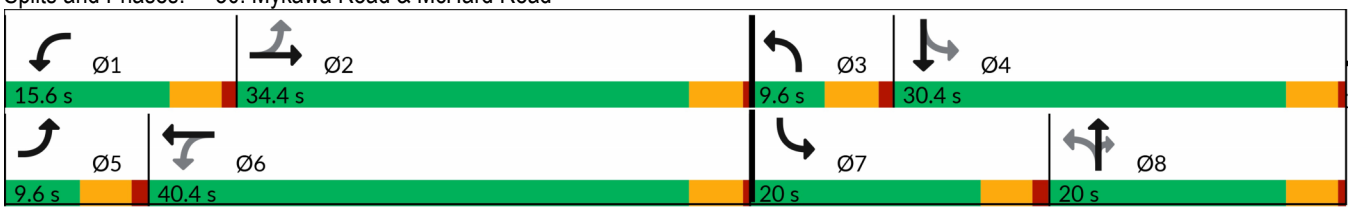
09/16/2024

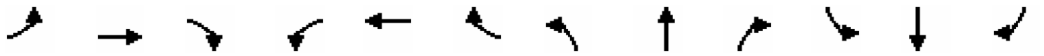
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0	4.0	5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0	20.0	9.5	20.0	
Total Split (s)	9.6	34.4		15.6	40.4		9.6	20.0	20.0	20.0	30.4	
Total Split (%)	10.7%	38.2%		17.3%	44.9%		10.7%	22.2%	22.2%	22.2%	33.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5	0.5	1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0	4.0	4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max		None	None		None	Max	Max	None	None	
Act Effct Green (s)	35.2	30.6		44.9	37.7		20.6	16.0	16.0	35.5	28.4	
Actuated g/C Ratio	0.39	0.34		0.50	0.42		0.23	0.18	0.18	0.40	0.32	
v/c Ratio	0.44	0.66		0.66	0.86		0.30	0.86	0.43	0.89	0.65	
Control Delay (s/veh)	20.5	27.6		22.9	31.4		22.4	60.8	6.1	49.5	29.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	20.5	27.6		22.9	31.4		22.4	60.8	6.1	49.5	29.1	
LOS	C	C		C	C		C	E	A	D	C	
Approach Delay (s/veh)		27.0			30.1			36.4			35.7	
Approach LOS		C			C			D			D	
90th %ile Green (s)	5.1	30.4		11.1	36.4		5.1	16.0	16.0	15.5	26.4	
90th %ile Term Code	Max	MaxR		Max	Max		Max	MaxR	MaxR	Max	Max	
70th %ile Green (s)	5.1	30.4		11.1	36.4		5.1	16.0	16.0	15.5	26.4	
70th %ile Term Code	Max	MaxR		Max	Max		Max	MaxR	MaxR	Max	Max	
50th %ile Green (s)	5.1	30.4		11.1	36.4		5.1	16.0	16.0	15.5	26.4	
50th %ile Term Code	Max	MaxR		Max	Max		Max	MaxR	MaxR	Max	Hold	
30th %ile Green (s)	5.1	31.4		10.1	36.4		5.1	16.0	16.0	15.5	26.4	
30th %ile Term Code	Max	Hold		Gap	Max		Max	MaxR	MaxR	Max	Hold	
10th %ile Green (s)	0.0	30.4		7.9	42.8		0.0	16.0	16.0	15.5	36.0	
10th %ile Term Code	Skip	MaxR		Gap	Hold		Skip	MaxR	MaxR	Max	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 89.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay (s/veh): 31.8 Intersection LOS: C
Intersection Capacity Utilization 82.9% ICU Level of Service E
Analysis Period (min) 15
90th %ile Actuated Cycle: 90
70th %ile Actuated Cycle: 90
50th %ile Actuated Cycle: 90
30th %ile Actuated Cycle: 90
10th %ile Actuated Cycle: 86.8

Splits and Phases: 30: Mykawa Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	659	68	191	896	68	50	37	104	44	27	21
Future Volume (vph)	10	659	68	191	896	68	50	37	104	44	27	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		0	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.986			0.989			0.889			0.934	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3490	0	1770	3500	0	1770	3146	0	1770	3306	0
Flt Permitted	0.204			0.166			0.721			0.618		
Satd. Flow (perm)	380	3490	0	309	3500	0	1343	3146	0	1151	3306	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			13			113			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2112			2249			716			526	
Travel Time (s)		48.0			51.1			16.3			12.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	11	716	74	208	974	74	54	40	113	48	29	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	790	0	208	1048	0	54	153	0	48	52	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
31: Hatfield Road & McHard Road

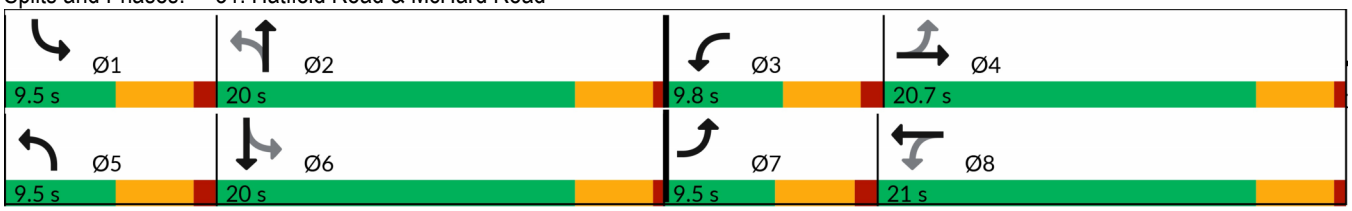
09/16/2024

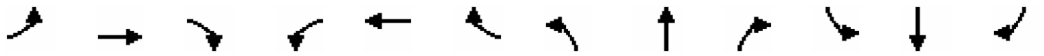
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.7		9.8	21.0		9.5	20.0		9.5	20.0	
Total Split (%)	15.8%	34.5%		16.3%	35.0%		15.8%	33.3%		15.8%	33.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	20.5	15.9		24.6	24.1		18.5	16.2		19.3	17.9	
Actuated g/C Ratio	0.37	0.29		0.44	0.44		0.33	0.29		0.35	0.32	
v/c Ratio	0.04	0.78		0.75	0.69		0.11	0.15		0.11	0.05	
Control Delay (s/veh)	10.3	25.2		32.9	19.0		11.5	6.9		11.4	10.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.3	25.2		32.9	19.0		11.5	6.9		11.4	10.6	
LOS	B	C		C	B		B	A		B	B	
Approach Delay (s/veh)		25.0			21.3			8.1			11.0	
Approach LOS		C			C			A			B	
90th %ile Green (s)	5.0	16.7		5.3	17.0		5.0	16.0		5.0	16.0	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	0.0	16.7		5.3	26.5		5.0	16.0		5.0	16.0	
70th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Hold	
50th %ile Green (s)	0.0	16.7		5.3	26.5		0.0	16.0		5.0	25.5	
50th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Max	Hold	
30th %ile Green (s)	0.0	16.4		5.3	26.2		0.0	16.0		0.0	16.0	
30th %ile Term Code	Skip	Gap		Max	Hold		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	12.9		5.3	22.7		0.0	16.0		0.0	16.0	
10th %ile Term Code	Skip	Gap		Max	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 55.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay (s/veh): 21.0 Intersection LOS: C
Intersection Capacity Utilization 52.6% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 60
70th %ile Actuated Cycle: 60
50th %ile Actuated Cycle: 60
30th %ile Actuated Cycle: 50.2
10th %ile Actuated Cycle: 46.7

Splits and Phases: 31: Hatfield Road & McHard Road





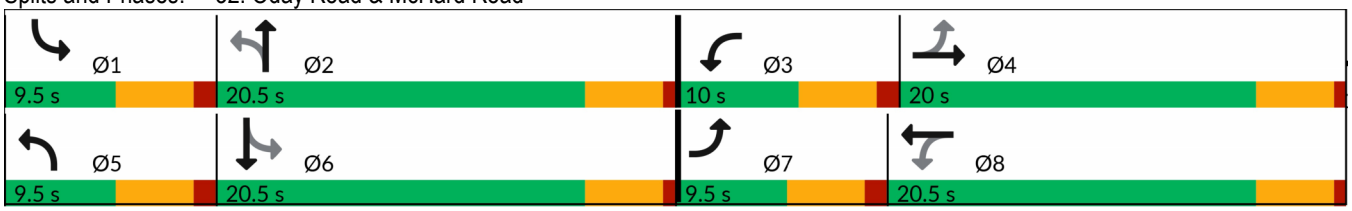
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	614	127	192	715	40	55	47	105	31	49	31
Future Volume (vph)	36	614	127	192	715	40	55	47	105	31	49	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.974			0.992			0.896			0.941	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3447	0	1770	3511	0	1770	3171	0	1770	3330	0
Flt Permitted	0.269			0.180			0.652			0.648		
Satd. Flow (perm)	501	3447	0	335	3511	0	1215	3171	0	1207	3330	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			9			114			34	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2019			2112			892			740	
Travel Time (s)		45.9			48.0			20.3			16.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	39	667	138	209	777	43	60	51	114	34	53	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	805	0	209	820	0	60	165	0	34	87	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

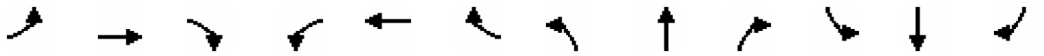
Lanes, Volumes, Timings
32: Oday Road & McHard Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		10.0	20.5		9.5	20.5		9.5	20.5	
Total Split (%)	15.8%	33.3%		16.7%	34.2%		15.8%	34.2%		15.8%	34.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	20.1	15.6		23.7	22.2		18.0	16.7		17.0	14.6	
Actuated g/C Ratio	0.37	0.29		0.44	0.41		0.33	0.31		0.32	0.27	
v/c Ratio	0.13	0.79		0.71	0.56		0.13	0.16		0.08	0.09	
Control Delay (s/veh)	10.6	24.9		29.2	17.3		11.7	6.9		11.3	11.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.6	24.9		29.2	17.3		11.7	6.9		11.3	11.7	
LOS	B	C		C	B		B	A		B	B	
Approach Delay (s/veh)		24.2			19.7			8.2			11.6	
Approach LOS		C			B			A			B	
90th %ile Green (s)	5.0	16.0		5.5	16.5		5.0	16.5		5.0	16.5	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	5.0	16.0		5.5	16.5		5.0	16.5		5.0	16.5	
70th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
50th %ile Green (s)	0.0	16.0		5.5	26.0		5.0	16.5		0.0	7.0	
50th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Skip	Hold	
30th %ile Green (s)	0.0	16.0		5.5	26.0		0.0	16.5		0.0	16.5	
30th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	13.3		5.5	23.3		0.0	16.5		0.0	16.5	
10th %ile Term Code	Skip	Gap		Max	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 53.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay (s/veh): 19.8		Intersection LOS: B	
Intersection Capacity Utilization 53.4%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 60			
70th %ile Actuated Cycle: 60			
50th %ile Actuated Cycle: 50.5			
30th %ile Actuated Cycle: 50.5			
10th %ile Actuated Cycle: 47.8			

Splits and Phases: 32: Oday Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	682	86	101	671	22	61	25	84	28	27	22
Future Volume (vph)	21	682	86	101	671	22	61	25	84	28	27	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.983			0.995			0.884			0.932	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3522	0	1770	3129	0	1770	3299	0
Flt Permitted	0.248			0.193			0.688			0.677		
Satd. Flow (perm)	462	3479	0	360	3522	0	1282	3129	0	1261	3299	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			5			91			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2021			2019			1010			1120	
Travel Time (s)		45.9			45.9			23.0			25.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	23	741	93	110	729	24	66	27	91	30	29	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	834	0	110	753	0	66	118	0	30	53	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
33: Garden Road & McHard Road

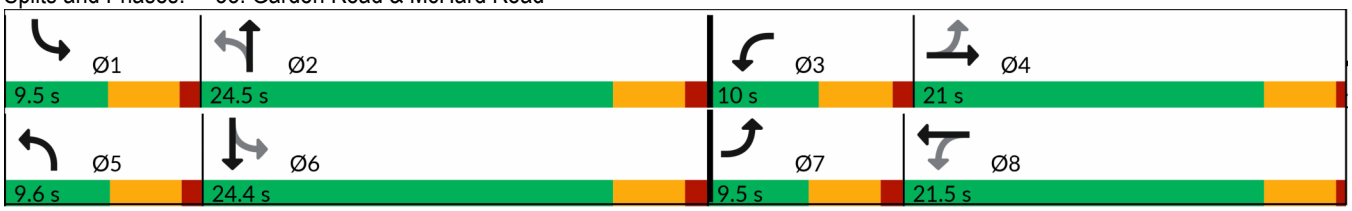
09/16/2024

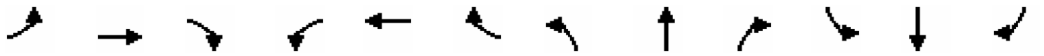
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	9.5	21.0		10.0	21.5		9.6	24.5		9.5	24.4	
Total Split (%)	14.6%	32.3%		15.4%	33.1%		14.8%	37.7%		14.6%	37.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	19.8	16.6		22.1	20.7		24.1	22.3		23.2	20.5	
Actuated g/C Ratio	0.34	0.28		0.38	0.35		0.41	0.38		0.40	0.35	
v/c Ratio	0.08	0.83		0.40	0.60		0.12	0.09		0.06	0.05	
Control Delay (s/veh)	12.5	30.6		16.6	20.2		11.0	6.3		10.5	10.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	12.5	30.6		16.6	20.2		11.0	6.3		10.5	10.7	
LOS	B	C		B	C		B	A		B	B	
Approach Delay (s/veh)		30.1			19.8			8.0			10.6	
Approach LOS		C			B			A			B	
90th %ile Green (s)	5.0	17.0		5.5	17.5		5.1	20.0		5.0	19.9	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	5.0	17.0		5.5	17.5		5.1	20.0		5.0	19.9	
70th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
50th %ile Green (s)	0.0	17.0		5.5	27.0		5.1	29.5		0.0	19.9	
50th %ile Term Code	Skip	Max		Max	Hold		Max	Hold		Skip	MaxR	
30th %ile Green (s)	0.0	17.0		5.5	27.0		0.0	20.0		0.0	20.0	
30th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	13.7		0.0	13.7		0.0	20.0		0.0	20.0	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 58.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay (s/veh): 22.7 Intersection LOS: C
Intersection Capacity Utilization 48.1% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 65
70th %ile Actuated Cycle: 65
50th %ile Actuated Cycle: 65
30th %ile Actuated Cycle: 55.5
10th %ile Actuated Cycle: 42.2

Splits and Phases: 33: Garden Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	756	67	93	625	7	44	6	43	7	9	6
Future Volume (vph)	12	756	67	93	625	7	44	6	43	7	9	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		150	100		0	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.988			0.998			0.869			0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3532	0	1770	3076	0	1770	3320	0
Flt Permitted	0.322			0.168			0.686			0.720		
Satd. Flow (perm)	600	3497	0	313	3532	0	1278	3076	0	1341	3320	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			2			47			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1957			2021			616			706	
Travel Time (s)		44.5			45.9			14.0			16.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	13	822	73	101	679	8	48	7	47	8	10	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	895	0	101	687	0	48	54	0	8	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

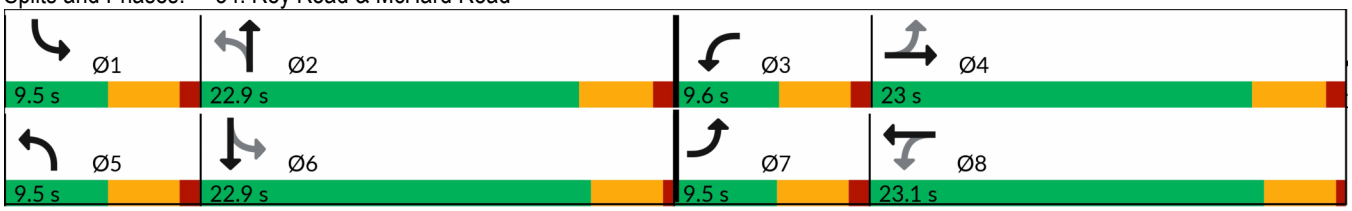
Lanes, Volumes, Timings
34: Roy Road & McHard Road

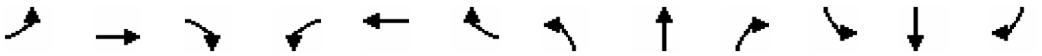
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	5.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	22.5		9.5	20.0	
Total Split (s)	9.5	23.0		9.6	23.1		9.5	22.9		9.5	22.9	
Total Split (%)	14.6%	35.4%		14.8%	35.5%		14.6%	35.2%		14.6%	35.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	1.0		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.5		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	21.6	17.8		24.2	23.8		23.3	22.4		21.7	19.5	
Actuated g/C Ratio	0.37	0.30		0.41	0.41		0.40	0.38		0.37	0.33	
v/c Ratio	0.04	0.83		0.39	0.48		0.09	0.04		0.01	0.02	
Control Delay (s/veh)	11.1	28.9		15.4	15.3		11.6	6.3		11.0	13.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	11.1	28.9		15.4	15.3		11.6	6.3		11.0	13.3	
LOS	B	C		B	B		B	A		B	B	
Approach Delay (s/veh)		28.7			15.3			8.8			12.5	
Approach LOS		C			B			A			B	
90th %ile Green (s)	5.0	18.5		5.1	19.1		5.0	18.4		5.0	18.9	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	0.0	18.5		5.1	28.6		5.0	27.9		0.0	18.9	
70th %ile Term Code	Skip	Max		Max	Hold		Max	Hold		Skip	MaxR	
50th %ile Green (s)	0.0	18.5		5.1	28.6		5.0	27.9		0.0	18.9	
50th %ile Term Code	Skip	Max		Max	Hold		Max	Hold		Skip	MaxR	
30th %ile Green (s)	0.0	18.5		5.1	28.6		0.0	18.4		0.0	18.9	
30th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Skip	MaxR	
10th %ile Green (s)	0.0	14.0		0.0	14.5		0.0	18.4		0.0	18.9	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 58.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 21.6		Intersection LOS: C	
Intersection Capacity Utilization 48.5%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 65			
50th %ile Actuated Cycle: 65			
30th %ile Actuated Cycle: 55.5			
10th %ile Actuated Cycle: 41.4			

Splits and Phases: 34: Roy Road & McHard Road





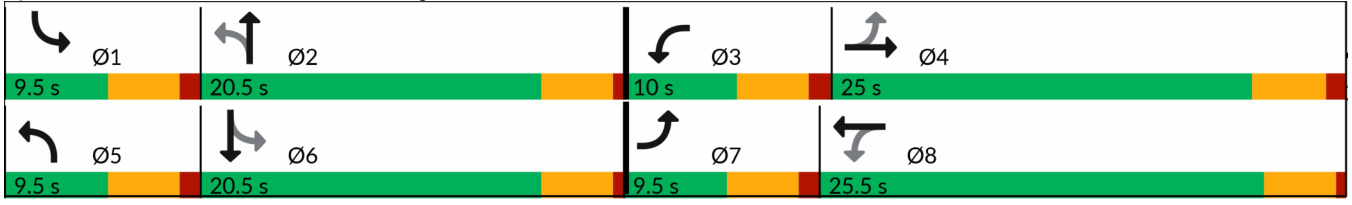
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	715	75	112	610	10	47	25	62	9	12	7
Future Volume (vph)	13	715	75	112	610	10	47	25	62	9	12	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	120		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.986			0.998			0.893			0.943	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3490	0	1770	3532	0	1770	3161	0	1770	3337	0
Flt Permitted	0.368			0.168			0.608			0.693		
Satd. Flow (perm)	685	3490	0	313	3532	0	1133	3161	0	1291	3337	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			3			67			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2239			1957			302			796	
Travel Time (s)		50.9			44.5			6.9			18.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	14	777	82	122	663	11	51	27	67	10	13	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	859	0	122	674	0	51	94	0	10	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

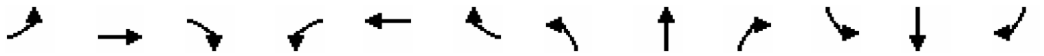
Lanes, Volumes, Timings
35: Max Road/Herridge Road & McHard Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	25.0		10.0	25.5		9.5	20.5		9.5	20.5	
Total Split (%)	14.6%	38.5%		15.4%	39.2%		14.6%	31.5%		14.6%	31.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	21.9	18.2		25.0	24.6		17.4	17.1		15.3	15.1	
Actuated g/C Ratio	0.41	0.34		0.47	0.46		0.33	0.32		0.29	0.28	
v/c Ratio	0.04	0.71		0.40	0.41		0.11	0.09		0.02	0.02	
Control Delay (s/veh)	8.1	19.8		11.9	11.4		14.3	7.8		16.2	15.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	8.1	19.8		11.9	11.4		14.3	7.8		16.2	15.3	
LOS	A	B		B	B		B	A		B	B	
Approach Delay (s/veh)		19.6			11.4			10.1			15.6	
Approach LOS		B			B			B			B	
90th %ile Green (s)	5.0	20.5		5.5	21.5		5.0	16.5		5.0	16.5	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	0.0	20.5		5.5	31.0		16.0	16.5		0.0	0.0	
70th %ile Term Code	Skip	Max		Max	Hold		Hold	MaxR		Skip	Skip	
50th %ile Green (s)	0.0	20.5		5.5	31.0		0.0	16.5		0.0	16.5	
50th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Skip	Hold	
30th %ile Green (s)	0.0	17.5		5.5	28.0		0.0	16.5		0.0	16.5	
30th %ile Term Code	Skip	Gap		Max	Hold		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	11.9		0.0	12.4		0.0	16.5		0.0	16.5	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 53.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay (s/veh): 15.3		Intersection LOS: B	
Intersection Capacity Utilization 48.5%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 55.5			
50th %ile Actuated Cycle: 55.5			
30th %ile Actuated Cycle: 52.5			
10th %ile Actuated Cycle: 36.9			

Splits and Phases: 35: Max Road/Herridge Road & McHard Road





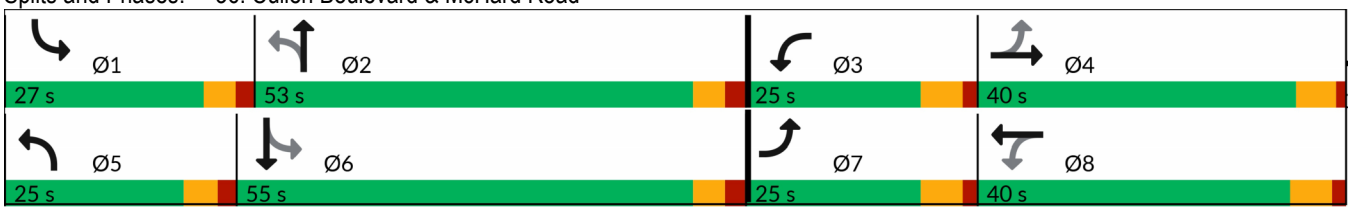
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	246	577	364	93	481	189	274	838	74	295	1510	286
Future Volume (vph)	246	577	364	93	481	189	274	838	74	295	1510	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	120		0	300		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.942			0.958			0.988			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3334	0	1770	3391	0	1770	3497	0	1770	3454	0
Flt Permitted	0.102			0.122			0.084			0.081		
Satd. Flow (perm)	190	3334	0	227	3391	0	156	3497	0	151	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		91			37			7			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		451			3590			1925			1330	
Travel Time (s)		10.3			81.6			43.8			30.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	267	627	396	101	523	205	298	911	80	321	1641	311
Shared Lane Traffic (%)												
Lane Group Flow (vph)	267	1023	0	101	728	0	298	991	0	321	1952	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

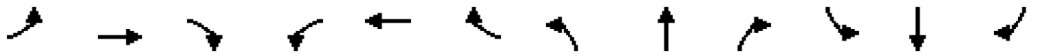
Lanes, Volumes, Timings
36: Cullen Boulevard & McHard Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	7.0		3.0	7.0		3.0	5.0		5.0	3.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	23.5		20.0	23.5	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	53.0		27.0	55.0	
Total Split (%)	17.2%	27.6%		17.2%	27.6%		17.2%	36.6%		18.6%	37.9%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.0		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	57.5	41.5		43.6	32.8		67.0	47.5		71.0	49.5	
Actuated g/C Ratio	0.40	0.29		0.30	0.23		0.47	0.33		0.49	0.34	
v/c Ratio	0.94	1.00		0.55	0.91		1.02	0.86		1.02	1.63	
Control Delay (s/veh)	80.0	73.1		40.2	67.2		101.3	53.3		97.7	318.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	80.0	73.1		40.2	67.2		101.3	53.3		97.7	318.3	
LOS	F	E		D	E		F	D		F	F	
Approach Delay (s/veh)		74.5			63.9			64.4			287.2	
Approach LOS		E			E			E			F	
90th %ile Green (s)	19.0	39.0		14.5	34.0		19.5	47.5		21.5	49.5	
90th %ile Term Code	Max	Hold		Gap	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	19.0	41.4		12.1	34.0		19.5	47.5		21.5	49.5	
70th %ile Term Code	Max	Hold		Gap	Max		Max	MaxR		Max	MaxR	
50th %ile Green (s)	19.0	42.8		10.7	34.0		19.5	47.5		21.5	49.5	
50th %ile Term Code	Max	Hold		Gap	Max		Max	MaxR		Max	MaxR	
30th %ile Green (s)	19.0	44.2		9.3	34.0		19.5	47.5		21.5	49.5	
30th %ile Term Code	Max	Hold		Gap	Max		Max	MaxR		Max	MaxR	
10th %ile Green (s)	19.0	40.4		7.3	28.2		19.5	47.5		21.5	49.5	
10th %ile Term Code	Max	Hold		Gap	Gap		Max	MaxR		Max	MaxR	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 143.8			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.63			
Intersection Signal Delay (s/veh): 155.8		Intersection LOS: F	
Intersection Capacity Utilization 118.2%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 145			
70th %ile Actuated Cycle: 145			
50th %ile Actuated Cycle: 145			
30th %ile Actuated Cycle: 145			
10th %ile Actuated Cycle: 139.2			

Splits and Phases: 36: Cullen Boulevard & McHard Road



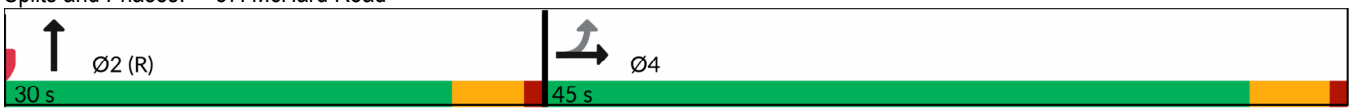


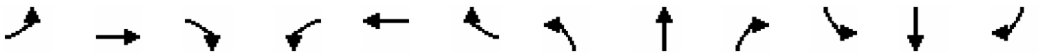
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	209	1121	0	0	0	0	0	99	36	0	0	0
Future Volume (vph)	209	1121	0	0	0	0	0	99	36	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.960				
Flt Protected	0.950											
Satd. Flow (prot)	1770	3539	0	0	0	0	0	3398	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	3539	0	0	0	0	0	3398	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	227							39				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		553			824			256			481	
Travel Time (s)		12.6			18.7			5.8			10.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	227	1218	0	0	0	0	0	108	39	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	1218	0	0	0	0	0	147	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2				
Detector Template	Left	Thru						Thru				
Leading Detector (ft)	20	100						100				
Trailing Detector (ft)	0	0						0				
Turn Type	Perm	NA						NA				
Protected Phases		4						2				
Permitted Phases	4											
Detector Phase	4	4						2				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	20.0	20.0						10.0				
Minimum Split (s)	35.0	35.0						25.0				
Total Split (s)	45.0	45.0						30.0				
Total Split (%)	60.0%	60.0%						40.0%				
Yellow Time (s)	4.5	4.5						4.0				
All-Red Time (s)	1.0	1.0						1.0				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	5.5	5.5						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None						C-Max				
Act Effct Green (s)	36.1	36.1						28.4				
Actuated g/C Ratio	0.48	0.48						0.38				
v/c Ratio	0.23	0.72						0.11				
Control Delay (s/veh)	2.1	17.7						12.6				
Queue Delay	0.0	0.0						0.0				
Total Delay (s/veh)	2.1	17.7						12.6				
LOS	A	B						B				
Approach Delay (s/veh)		15.3						12.6				
Approach LOS		B						B				
90th %ile Green (s)	39.5	39.5						25.0				
90th %ile Term Code	Max	Max						Coord				
70th %ile Green (s)	39.5	39.5						25.0				
70th %ile Term Code	Max	Max						Coord				
50th %ile Green (s)	38.0	38.0						26.5				
50th %ile Term Code	Gap	Gap						Coord				
30th %ile Green (s)	34.4	34.4						30.1				
30th %ile Term Code	Gap	Gap						Coord				
10th %ile Green (s)	29.1	29.1						35.4				
10th %ile Term Code	Gap	Gap						Coord				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay (s/veh): 15.0		Intersection LOS: B	
Intersection Capacity Utilization 92.3%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 37: McHard Road



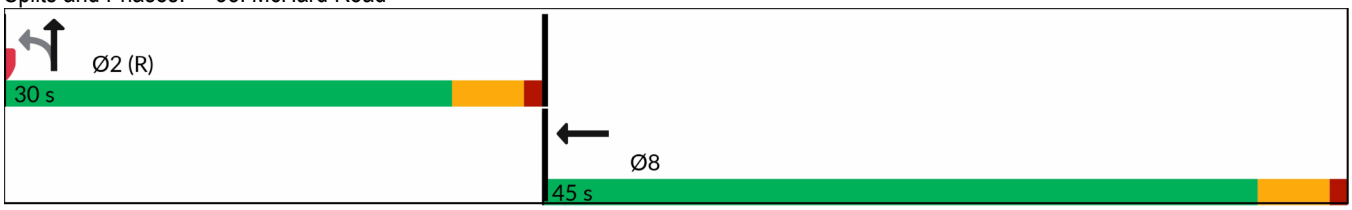


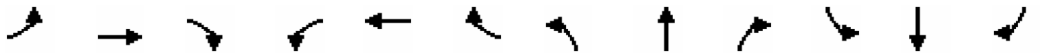
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1024	80	124	188	0	0	0	0
Future Volume (vph)	0	0	0	0	1024	80	124	188	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.989							
Flt Protected								0.980				
Satd. Flow (prot)	0	0	0	0	3500	0	0	3468	0	0	0	0
Flt Permitted								0.980				
Satd. Flow (perm)	0	0	0	0	3500	0	0	3468	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					16			67				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			3717			481			228	
Travel Time (s)		14.8			84.5			10.9			5.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	1113	87	135	204	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1200	0	0	339	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Turn Type					NA		Perm	NA				
Protected Phases					8			2				
Permitted Phases							2					
Detector Phase					8		2	2				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)					20.0		10.0	10.0				
Minimum Split (s)					35.0		25.0	25.0				
Total Split (s)					45.0		30.0	30.0				
Total Split (%)					60.0%		40.0%	40.0%				
Yellow Time (s)					4.0		4.0	4.0				
All-Red Time (s)					1.0		1.0	1.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode					None		C-Max	C-Max				
Act Effct Green (s)					35.0			30.0				
Actuated g/C Ratio					0.47			0.40				
v/c Ratio					0.73			0.24				
Control Delay (s/veh)					18.5			11.8				
Queue Delay					0.0			0.0				
Total Delay (s/veh)					18.5			11.8				
LOS					B			B				
Approach Delay (s/veh)					18.5			11.8				
Approach LOS					B			B				
90th %ile Green (s)					40.0		25.0	25.0				
90th %ile Term Code					Max		Coord	Coord				
70th %ile Green (s)					38.9		26.1	26.1				
70th %ile Term Code					Gap		Coord	Coord				
50th %ile Green (s)					36.0		29.0	29.0				
50th %ile Term Code					Gap		Coord	Coord				
30th %ile Green (s)					32.6		32.4	32.4				
30th %ile Term Code					Gap		Coord	Coord				
10th %ile Green (s)					27.4		37.6	37.6				
10th %ile Term Code					Gap		Coord	Coord				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 17.0		Intersection LOS: B	
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 38: McHard Road



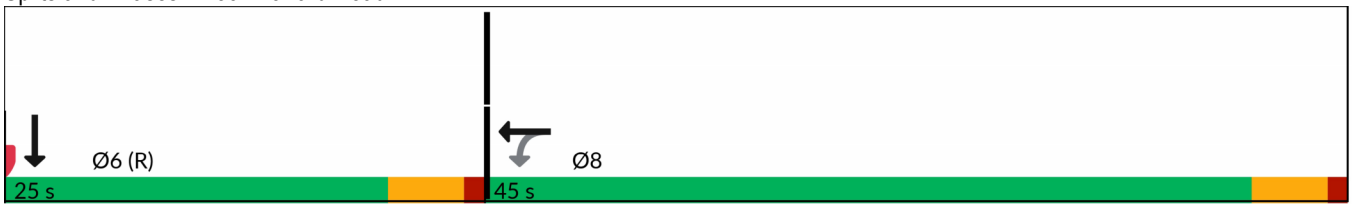


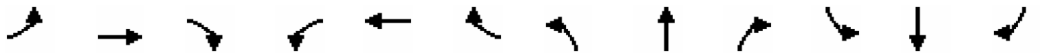
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	70	1084	0	0	0	0	0	61	112
Future Volume (vph)	0	0	0	70	1084	0	0	0	0	0	61	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt											0.903	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1770	3539	0	0	0	0	0	3196	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1770	3539	0	0	0	0	0	3196	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)				76							70	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1629			651			450			272	
Travel Time (s)		37.0			14.8			10.2			6.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	76	1178	0	0	0	0	0	66	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	76	1178	0	0	0	0	0	188	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2						2	
Detector Template				Left	Thru						Thru	
Leading Detector (ft)				20	100						100	
Trailing Detector (ft)				0	0						0	
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Detector Phase				8	8						6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				20.0	20.0						10.0	
Minimum Split (s)				35.0	35.0						23.0	
Total Split (s)				45.0	45.0						25.0	
Total Split (%)				64.3%	64.3%						35.7%	
Yellow Time (s)				4.0	4.0						4.0	
All-Red Time (s)				1.0	1.0						1.0	
Lost Time Adjust (s)				0.0	0.0						0.0	
Total Lost Time (s)				5.0	5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				None	None						C-Max	
Act Effct Green (s)				33.9	33.9						26.1	
Actuated g/C Ratio				0.48	0.48						0.37	
v/c Ratio				0.08	0.69						0.15	
Control Delay (s/veh)				2.2	15.8						11.1	
Queue Delay				0.0	0.0						0.0	
Total Delay (s/veh)				2.2	15.8						11.1	
LOS				A	B						B	
Approach Delay (s/veh)					15.0						11.1	
Approach LOS					B						B	
90th %ile Green (s)				40.0	40.0						20.0	
90th %ile Term Code				Max	Max						Coord	
70th %ile Green (s)				37.7	37.7						22.3	
70th %ile Term Code				Gap	Gap						Coord	
50th %ile Green (s)				34.8	34.8						25.2	
50th %ile Term Code				Gap	Gap						Coord	
30th %ile Green (s)				31.4	31.4						28.6	
30th %ile Term Code				Gap	Gap						Coord	
10th %ile Green (s)				25.4	25.4						34.6	
10th %ile Term Code				Gap	Gap						Coord	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 14.5		Intersection LOS: B	
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 39: McHard Road



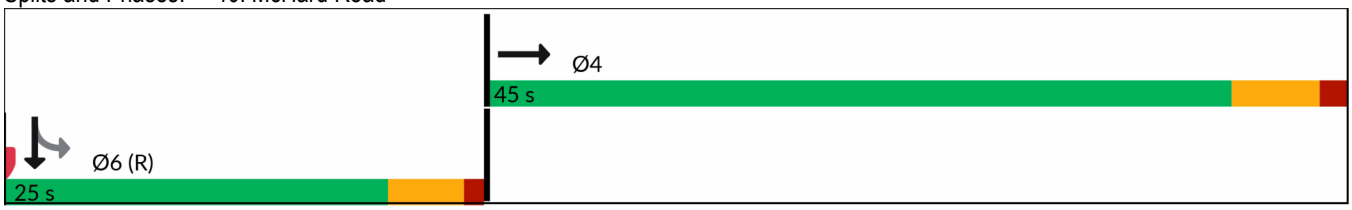


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1269	129	0	0	0	0	0	0	65	64	0
Future Volume (vph)	0	1269	129	0	0	0	0	0	0	65	64	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor												
Frt		0.986										
Flt Protected											0.975	
Satd. Flow (prot)	0	3490	0	0	0	0	0	0	0	0	3451	0
Flt Permitted											0.975	
Satd. Flow (perm)	0	3490	0	0	0	0	0	0	0	0	3451	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		25									47	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1663			553			168			450	
Travel Time (s)		37.8			12.6			3.8			10.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1379	140	0	0	0	0	0	0	71	70	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1519	0	0	0	0	0	0	0	0	141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2								1	2	
Detector Template		Thru								Left	Thru	
Leading Detector (ft)		100								20	100	
Trailing Detector (ft)		0								0	0	
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Detector Phase		4								6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		20.0								10.0	10.0	
Minimum Split (s)		35.0								23.0	23.0	
Total Split (s)		45.0								25.0	25.0	
Total Split (%)		64.3%								35.7%	35.7%	
Yellow Time (s)		4.5								4.0	4.0	
All-Red Time (s)		1.5								1.0	1.0	
Lost Time Adjust (s)		0.0									0.0	
Total Lost Time (s)		6.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None								C-Max	C-Max	
Act Effct Green (s)		37.7									21.3	
Actuated g/C Ratio		0.54									0.30	
v/c Ratio		0.80									0.13	
Control Delay (s/veh)		16.7									10.2	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		16.7									10.2	
LOS		B									B	
Approach Delay (s/veh)		16.7									10.2	
Approach LOS		B									B	
90th %ile Green (s)		39.0								20.0	20.0	
90th %ile Term Code		Max								Coord	Coord	
70th %ile Green (s)		39.0								20.0	20.0	
70th %ile Term Code		Max								Coord	Coord	
50th %ile Green (s)		39.0								20.0	20.0	
50th %ile Term Code		Max								Coord	Coord	
30th %ile Green (s)		38.2								20.8	20.8	
30th %ile Term Code		Gap								Coord	Coord	
10th %ile Green (s)		33.3								25.7	25.7	
10th %ile Term Code		Gap								Coord	Coord	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay (s/veh): 16.2		Intersection LOS: B	
Intersection Capacity Utilization 56.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 40: McHard Road





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	628	474	188	829	253	93
Future Volume (vph)	628	474	188	829	253	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	120		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		0	
Lane Util. Factor	0.91	0.91	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.973	0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3299	1441	1770	3539	1770	1583
Flt Permitted			0.158		0.950	
Satd. Flow (perm)	3299	1441	294	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	26	366				101
Link Speed (mph)	30			30	30	
Link Distance (ft)	975			186	512	
Travel Time (s)	22.2			4.2	11.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	683	515	204	901	275	101
Shared Lane Traffic (%)		29%				
Lane Group Flow (vph)	832	366	204	901	275	101
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						

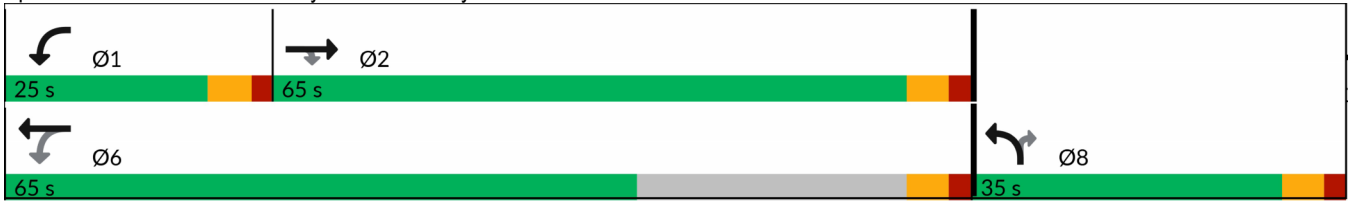
Lanes, Volumes, Timings
41: County Place Parkway & McHard Road

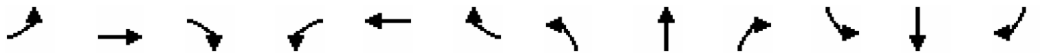
09/16/2024

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	20.0	20.0	3.0	20.0	5.0	5.0
Minimum Split (s)	65.0	65.0	20.0	45.0	25.0	25.0
Total Split (s)	65.0	65.0	25.0	65.0	35.0	35.0
Total Split (%)	52.0%	52.0%	20.0%	52.0%	28.0%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Max	Max
Act Effct Green (s)	32.5	32.5	49.3	49.3	29.4	29.4
Actuated g/C Ratio	0.36	0.36	0.54	0.54	0.32	0.32
v/c Ratio	0.70	0.49	0.61	0.47	0.48	0.17
Control Delay (s/veh)	27.2	4.5	18.9	13.2	30.6	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.2	4.5	18.9	13.2	30.6	6.8
LOS	C	A	B	B	C	A
Approach Delay (s/veh)	20.3			14.2	24.2	
Approach LOS	C			B	C	
90th %ile Green (s)	46.5	46.5	13.9	66.4	29.0	29.0
90th %ile Term Code	Gap	Gap	Gap	Hold	MaxR	MaxR
70th %ile Green (s)	37.3	37.3	12.0	55.3	29.0	29.0
70th %ile Term Code	Gap	Gap	Gap	Hold	MaxR	MaxR
50th %ile Green (s)	32.2	32.2	10.8	49.0	29.0	29.0
50th %ile Term Code	Gap	Gap	Gap	Hold	MaxR	MaxR
30th %ile Green (s)	27.3	27.3	9.6	42.9	29.0	29.0
30th %ile Term Code	Gap	Gap	Gap	Hold	MaxR	MaxR
10th %ile Green (s)	21.6	21.6	8.1	35.7	29.0	29.0
10th %ile Term Code	Gap	Gap	Gap	Hold	MaxR	MaxR

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 90.9			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 18.3		Intersection LOS: B	
Intersection Capacity Utilization 61.8%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 107.4			
70th %ile Actuated Cycle: 96.3			
50th %ile Actuated Cycle: 90			
30th %ile Actuated Cycle: 83.9			
10th %ile Actuated Cycle: 76.7			

Splits and Phases: 41: County Place Parkway & McHard Road



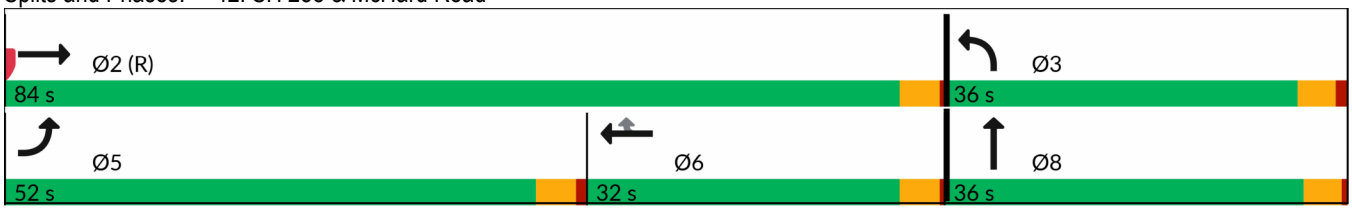


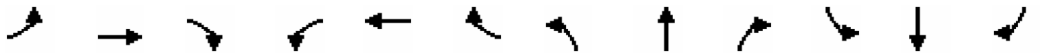
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	913	1901	0	0	737	508	573	389	192	0	0	0
Future Volume (vph)	913	1901	0	0	737	508	573	389	192	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850		0.950				
Flt Protected	0.950	0.998					0.950					
Satd. Flow (prot)	1610	3383	0	0	5085	1583	1770	3362	0	0	0	0
Flt Permitted	0.950	0.709					0.950					
Satd. Flow (perm)	1610	2404	0	0	5085	1583	1770	3362	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						77		69				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		505			975			278			566	
Travel Time (s)		11.5			22.2			6.3			12.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	992	2066	0	0	801	552	623	423	209	0	0	0
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	893	2165	0	0	801	552	623	632	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Turn Type	Prot	NA			NA	Perm	Prot	NA				
Protected Phases	5	2			6		3	8				
Permitted Phases						6						
Detector Phase	5	2			6	6	3	8				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0			4.0	4.0	5.0	4.0				
Minimum Split (s)	9.5	20.0			20.0	20.0	9.5	20.0				
Total Split (s)	52.0	84.0			32.0	32.0	36.0	36.0				
Total Split (%)	43.3%	70.0%			26.7%	26.7%	30.0%	30.0%				
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5				
All-Red Time (s)	1.0	0.5			0.5	0.5	1.0	0.5				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	4.0			4.0	4.0	4.5	4.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	None	C-Max			None	None	None	Max				
Act Effct Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
Actuated g/C Ratio	0.40	0.67			0.23	0.23	0.26	0.27				
v/c Ratio	1.40	1.43			0.68	1.29	1.34	0.67				
Control Delay (s/veh)	220.9	223.4			45.2	180.1	204.1	38.8				
Queue Delay	0.6	0.3			0.0	0.0	0.0	0.0				
Total Delay (s/veh)	221.5	223.7			45.2	180.1	204.1	38.8				
LOS	F	F			D	F	F	D				
Approach Delay (s/veh)		223.0			100.2			120.8				
Approach LOS		F			F			F				
90th %ile Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
90th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
70th %ile Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
70th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
50th %ile Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
50th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
30th %ile Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
30th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
10th %ile Green (s)	47.5	80.0			28.0	28.0	31.5	32.0				
10th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.43			
Intersection Signal Delay (s/veh): 171.1		Intersection LOS: F	
Intersection Capacity Utilization 149.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 42: SH 288 & McHard Road



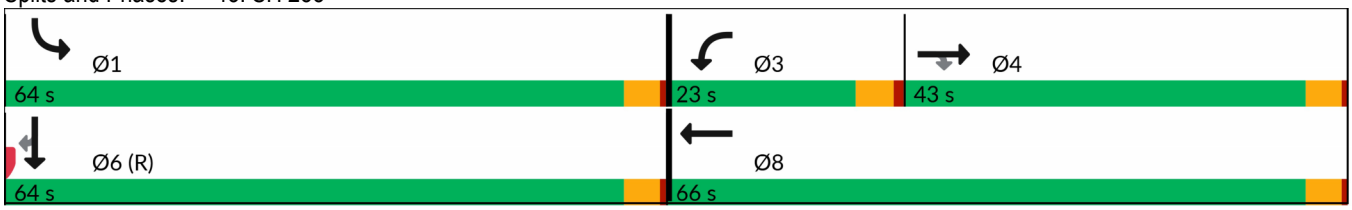


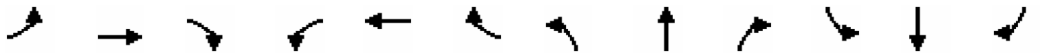
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱	↰	↑↑					↰	↑↑	↱
Traffic Volume (vph)	0	1858	588	321	1220	0	0	0	0	1002	660	647
Future Volume (vph)	0	1858	588	321	1220	0	0	0	0	1002	660	647
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117									46
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		807			505			209			785	
Travel Time (s)		18.3			11.5			4.8			17.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	2020	639	349	1326	0	0	0	0	1089	717	703
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2020	639	349	1326	0	0	0	0	1089	717	703
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Detector Phase		4	4	3	8					1	6	6
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	5.0	4.0					4.0	4.0	4.0
Minimum Split (s)		20.0	20.0	9.5	20.0					20.0	20.0	20.0
Total Split (s)		43.0	43.0	23.0	66.0					64.0	64.0	64.0
Total Split (%)		33.1%	33.1%	17.7%	50.8%					49.2%	49.2%	49.2%
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		0.5	0.5	1.0	0.5					0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0	4.5	4.0					4.0	4.0	4.0
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		None	None	None	None					Max	C-Max	C-Max
Act Effct Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
Actuated g/C Ratio		0.30	0.30	0.14	0.48					0.46	0.46	0.46
v/c Ratio		1.32	1.15	1.39	0.79					1.33	0.44	0.93
Control Delay (s/veh)		187.7	120.5	239.2	32.6					189.8	24.7	51.3
Queue Delay		0.0	0.0	0.0	36.1					0.0	0.0	0.0
Total Delay (s/veh)		187.7	120.5	239.2	68.7					189.8	24.7	51.3
LOS		F	F	F	E					F	C	D
Approach Delay (s/veh)		171.6			104.2						103.8	
Approach LOS		F			F						F	
90th %ile Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
90th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
70th %ile Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
70th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
50th %ile Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
50th %ile Term Code		Max	Max	Max	Hold					Coord	Coord	Coord
30th %ile Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
30th %ile Term Code		Max	Max	Max	Hold					Coord	Coord	Coord
10th %ile Green (s)		39.0	39.0	18.5	62.0					60.0	60.0	60.0
10th %ile Term Code		Max	Max	Max	Hold					Coord	Coord	Coord

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.39			
Intersection Signal Delay (s/veh): 130.2		Intersection LOS: F	
Intersection Capacity Utilization 149.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 43: SH 288





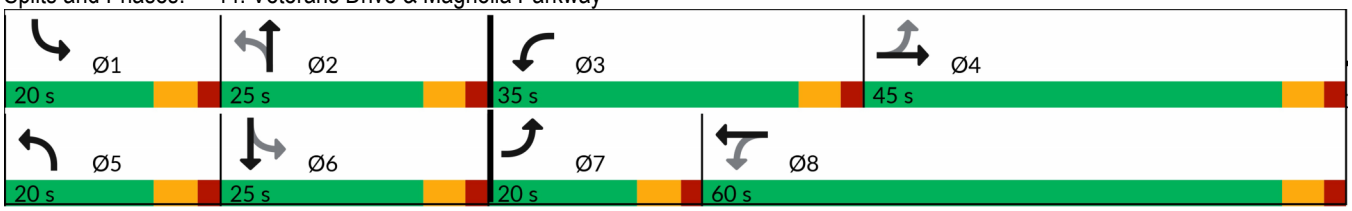
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	601	115	275	901	93	74	148	209	133	332	115
Future Volume (vph)	53	601	115	275	901	93	74	148	209	133	332	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	220		150	120		150	80		80
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.976			0.986			0.912			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3490	0	1770	3228	0	1770	3401	0
Flt Permitted	0.163			0.151			0.392			0.342		
Satd. Flow (perm)	304	3454	0	281	3490	0	730	3228	0	637	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			11			227			32	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3334			4184			1951			5273	
Travel Time (s)		75.8			95.1			44.3			119.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	58	653	125	299	979	101	80	161	227	145	361	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	778	0	299	1080	0	80	388	0	145	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

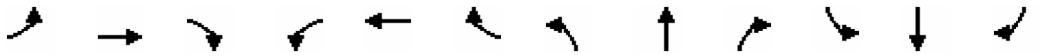
Lanes, Volumes, Timings
44: Veterans Drive & Magnoila Parkway 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	7.0		3.0	7.0		10.0	5.0		10.0	5.0	
Minimum Split (s)	20.0	45.0		35.0	40.0		20.0	25.0		20.0	25.0	
Total Split (s)	20.0	45.0		35.0	60.0		20.0	25.0		20.0	25.0	
Total Split (%)	16.0%	36.0%		28.0%	48.0%		16.0%	20.0%		16.0%	20.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	37.2	30.0		52.8	42.3		30.0	19.3		33.9	24.5	
Actuated g/C Ratio	0.36	0.29		0.52	0.41		0.29	0.19		0.33	0.24	
v/c Ratio	0.27	0.76		0.77	0.75		0.25	0.49		0.42	0.58	
Control Delay (s/veh)	17.2	37.8		33.1	29.3		27.6	19.0		29.6	39.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	17.2	37.8		33.1	29.3		27.6	19.0		29.6	39.2	
LOS	B	D		C	C		C	B		C	D	
Approach Delay (s/veh)		36.4			30.2			20.4			37.0	
Approach LOS		D			C			C			D	
90th %ile Green (s)	8.8	39.0		25.7	55.9		12.7	19.0		14.0	20.3	
90th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR		Max	Hold	
70th %ile Green (s)	8.0	34.5		19.7	46.2		10.2	19.0		13.9	22.7	
70th %ile Term Code	Gap	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	7.3	31.1		15.8	39.6		10.0	19.0		11.5	20.5	
50th %ile Term Code	Gap	Hold		Gap	Gap		Min	MaxR		Gap	Hold	
30th %ile Green (s)	6.6	27.5		13.2	34.1		10.0	19.0		10.0	19.0	
30th %ile Term Code	Gap	Hold		Gap	Gap		Min	MaxR		Min	Hold	
10th %ile Green (s)	0.0	19.6		10.8	36.4		0.0	19.0		10.0	35.0	
10th %ile Term Code	Skip	Gap		Gap	Hold		Skip	MaxR		Min	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 102.3			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 31.6		Intersection LOS: C	
Intersection Capacity Utilization 76.7%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 121.7			
70th %ile Actuated Cycle: 111.1			
50th %ile Actuated Cycle: 101.4			
30th %ile Actuated Cycle: 93.7			
10th %ile Actuated Cycle: 83.4			

Splits and Phases: 44: Veterans Drive & Magnoila Parkway





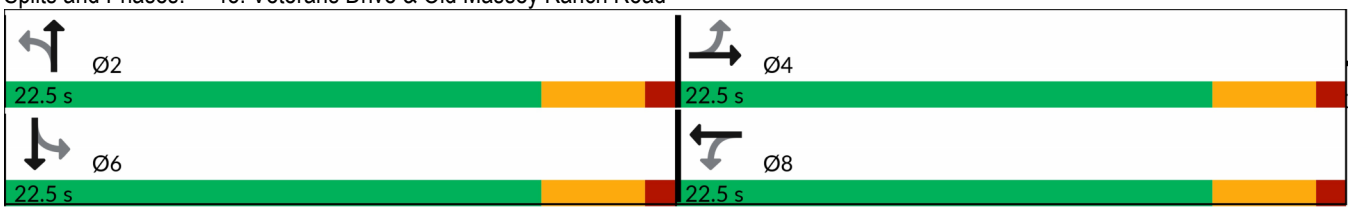
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	4	172	1	1	1	99	275	1	4	466	30
Future Volume (vph)	40	4	172	1	1	1	99	275	1	4	466	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.853			0.925			0.999			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3019	0	1770	3274	0	1770	3536	0	1770	3507	0
Flt Permitted	0.756			0.755			0.451			0.569		
Satd. Flow (perm)	1408	3019	0	1406	3274	0	840	3536	0	1060	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		208			416			1			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1272			1116			5316			5367	
Travel Time (s)		28.9			25.4			120.8			122.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	43	4	187	1	1	1	108	299	1	4	507	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	191	0	1	2	0	108	300	0	4	540	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

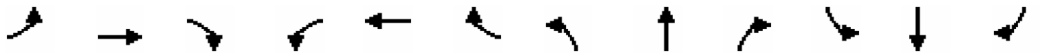
Lanes, Volumes, Timings
45: Veterans Drive & Old Massey Ranch Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)	6.5	6.5		6.5	6.5		15.4	15.4		15.4	15.4	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.55	0.55		0.55	0.55	
v/c Ratio	0.13	0.22		0.00	0.00		0.23	0.15		0.01	0.28	
Control Delay (s/veh)	9.7	2.5		9.0	0.0		6.9	4.9		4.8	5.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.7	2.5		9.0	0.0		6.9	4.9		4.8	5.1	
LOS	A	A		A	A		A	A		A	A	
Approach Delay (s/veh)		3.8			3.0			5.4			5.1	
Approach LOS		A			A			A			A	
90th %ile Green (s)	8.1	8.1		8.1	8.1		15.0	15.0		15.0	15.0	
90th %ile Term Code	Gap	Gap		Hold	Hold		Gap	Gap		Hold	Hold	
70th %ile Green (s)	6.9	6.9		6.9	6.9		11.6	11.6		11.6	11.6	
70th %ile Term Code	Gap	Gap		Hold	Hold		Hold	Hold		Gap	Gap	
50th %ile Green (s)	6.2	6.2		6.2	6.2		9.6	9.6		9.6	9.6	
50th %ile Term Code	Gap	Gap		Hold	Hold		Hold	Hold		Gap	Gap	
30th %ile Green (s)	5.7	5.7		5.7	5.7		14.1	14.1		14.1	14.1	
30th %ile Term Code	Gap	Gap		Hold	Hold		Dwell	Dwell		Dwell	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		21.1	21.1		21.1	21.1	
10th %ile Term Code	Skip	Skip		Skip	Skip		Dwell	Dwell		Dwell	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 27.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay (s/veh): 5.0		Intersection LOS: A	
Intersection Capacity Utilization 39.5%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 32.1			
70th %ile Actuated Cycle: 27.5			
50th %ile Actuated Cycle: 24.8			
30th %ile Actuated Cycle: 28.8			
10th %ile Actuated Cycle: 25.6			

Splits and Phases: 45: Veterans Drive & Old Massey Ranch Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	15	12	118	16	112	15	188	108	169	335	41
Future Volume (vph)	19	15	12	118	16	112	15	188	108	169	335	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.933			0.868			0.945			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3302	0	1770	3072	0	1770	3345	0	1770	3479	0
Flt Permitted	0.664			0.737			0.512			0.557		
Satd. Flow (perm)	1237	3302	0	1373	3072	0	954	3345	0	1038	3479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			122			117			35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1459			1916			1299			5316	
Travel Time (s)		33.2			43.5			29.5			120.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	21	16	13	128	17	122	16	204	117	184	364	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	29	0	128	139	0	16	321	0	184	409	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
46: Veterans Drive & Hastings Canon Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)	8.5	8.5		8.5	8.5		16.6	16.6		16.6	16.6	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.54	0.54		0.54	0.54	
v/c Ratio	0.06	0.03		0.34	0.15		0.03	0.17		0.33	0.22	
Control Delay (s/veh)	9.3	6.8		12.1	3.6		6.2	4.2		8.9	5.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.3	6.8		12.1	3.6		6.2	4.2		8.9	5.7	
LOS	A	A		B	A		A	A		A	A	
Approach Delay (s/veh)		7.8			7.7			4.3			6.7	
Approach LOS		A			A			A			A	
90th %ile Green (s)	13.3	13.3		13.3	13.3		18.0	18.0		18.0	18.0	
90th %ile Term Code	Hold	Hold		Gap	Gap		Hold	Hold		Max	Max	
70th %ile Green (s)	9.7	9.7		9.7	9.7		14.2	14.2		14.2	14.2	
70th %ile Term Code	Hold	Hold		Gap	Gap		Hold	Hold		Gap	Gap	
50th %ile Green (s)	7.9	7.9		7.9	7.9		10.8	10.8		10.8	10.8	
50th %ile Term Code	Hold	Hold		Gap	Gap		Hold	Hold		Gap	Gap	
30th %ile Green (s)	6.9	6.9		6.9	6.9		12.1	12.1		12.1	12.1	
30th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell		Dwell	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		20.8	20.8		20.8	20.8	
10th %ile Term Code	Skip	Skip		Skip	Skip		Dwell	Dwell		Dwell	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 30.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.34			
Intersection Signal Delay (s/veh): 6.3		Intersection LOS: A	
Intersection Capacity Utilization 43.7%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 40.3			
70th %ile Actuated Cycle: 32.9			
50th %ile Actuated Cycle: 27.7			
30th %ile Actuated Cycle: 28			
10th %ile Actuated Cycle: 25.3			

Splits and Phases: 46: Veterans Drive & Hastings Canon Road



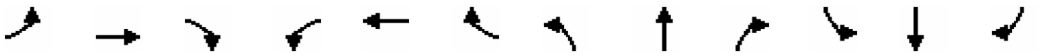
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	395	224	518	266	77	269
Future Volume (vph)	395	224	518	266	77	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		120	150		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.946					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3348	0	1770	3539	1770	1583
Flt Permitted			0.395		0.950	
Satd. Flow (perm)	3348	0	736	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	243					292
Link Speed (mph)	30			30	30	
Link Distance (ft)	601			563	5273	
Travel Time (s)	13.7			12.8	119.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	429	243	563	289	84	292
Shared Lane Traffic (%)						
Lane Group Flow (vph)	672	0	563	289	84	292
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases			8		2	2
Detector Phase	4		8	8	2	2
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	96.0		96.0	96.0	24.0	24.0
Total Split (%)	80.0%		80.0%	80.0%	20.0%	20.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		None	None	Min	Min
Act Effct Green (s)	91.6		91.6	91.6	10.8	10.8
Actuated g/C Ratio	0.82		0.82	0.82	0.10	0.10
v/c Ratio	0.24		0.93	0.10	0.49	0.70
Control Delay (s/veh)	1.7		34.5	2.2	57.3	15.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	1.7		34.5	2.2	57.3	15.1
LOS	A		C	A	E	B
Approach Delay (s/veh)	1.7			23.6	24.5	
Approach LOS	A			C	C	
90th %ile Green (s)	91.5		91.5	91.5	16.0	16.0
90th %ile Term Code	Hold		Max	Max	Gap	Gap
70th %ile Green (s)	91.5		91.5	91.5	12.3	12.3
70th %ile Term Code	Hold		Max	Max	Gap	Gap
50th %ile Green (s)	91.5		91.5	91.5	10.6	10.6
50th %ile Term Code	Hold		Max	Max	Gap	Gap
30th %ile Green (s)	91.5		91.5	91.5	8.9	8.9
30th %ile Term Code	Hold		Max	Max	Gap	Gap
10th %ile Green (s)	91.5		91.5	91.5	6.6	6.6
10th %ile Term Code	Hold		Max	Max	Gap	Gap

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 111.4			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay (s/veh): 16.0		Intersection LOS: B	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 116.5			
70th %ile Actuated Cycle: 112.8			
50th %ile Actuated Cycle: 111.1			
30th %ile Actuated Cycle: 109.4			
10th %ile Actuated Cycle: 107.1			

Splits and Phases: 47: Veterans Drive & Walnut Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	207	3	135	0	1	19	46	958	3	0	826	182
Future Volume (vph)	207	3	135	0	1	19	46	958	3	0	826	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	60		0	120		150	120		150	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.853			0.857						0.973	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1770	3019	0	1863	3033	0	1770	3539	0	1863	3444	0
Flt Permitted	0.741						0.163					
Satd. Flow (perm)	1380	3019	0	1863	3033	0	304	3539	0	1863	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		413			279						44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1082			1201			1142			806	
Travel Time (s)		24.6			27.3			26.0			18.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	225	3	147	0	1	21	50	1041	3	0	898	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	225	150	0	0	22	0	50	1044	0	0	1096	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		17			17			32			32	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
48: Kirby Drive & North Spectrum Boulevard

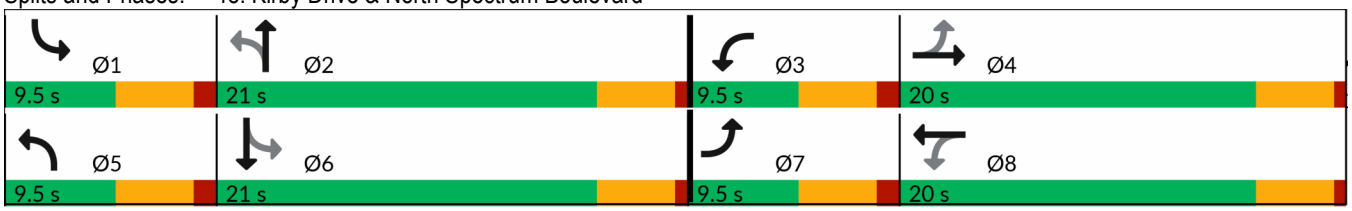
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		9.5	20.0		9.5	21.0		9.5	21.0	
Total Split (%)	15.8%	33.3%		15.8%	33.3%		15.8%	35.0%		15.8%	35.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	6.7	7.2			5.7		22.9	23.4			20.0	
Actuated g/C Ratio	0.17	0.19			0.15		0.59	0.60			0.51	
v/c Ratio	0.78	0.17			0.03		0.13	0.49			0.61	
Control Delay (s/veh)	36.7	0.4			0.1		5.1	5.8			11.8	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay (s/veh)	36.7	0.4			0.1		5.1	5.8			11.8	
LOS	D	A			A		A	A			B	
Approach Delay (s/veh)		22.2			0.1			5.8			11.8	
Approach LOS		C			A			A			B	
90th %ile Green (s)	5.0	15.0		0.0	5.5		5.0	26.5		0.0	17.0	
90th %ile Term Code	Max	Hold		Skip	Gap		Max	Hold		Skip	Max	
70th %ile Green (s)	5.0	5.5		0.0	0.0		5.0	26.5		0.0	17.0	
70th %ile Term Code	Max	Gap		Skip	Skip		Max	Hold		Skip	Max	
50th %ile Green (s)	5.0	5.5		0.0	0.0		0.0	17.0		0.0	17.0	
50th %ile Term Code	Max	Gap		Skip	Skip		Skip	MaxR		Skip	Max	
30th %ile Green (s)	5.0	5.5		0.0	0.0		0.0	17.0		0.0	17.0	
30th %ile Term Code	Max	Gap		Skip	Skip		Skip	MaxR		Skip	Max	
10th %ile Green (s)	5.0	5.5		0.0	0.0		0.0	30.5		0.0	30.5	
10th %ile Term Code	Max	Hold		Skip	Skip		Skip	Dwell		Skip	Dwell	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 38.9
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay (s/veh): 10.7 Intersection LOS: B
Intersection Capacity Utilization 61.4% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 49.5
70th %ile Actuated Cycle: 40
50th %ile Actuated Cycle: 30.5
30th %ile Actuated Cycle: 30.5
10th %ile Actuated Cycle: 44

Splits and Phases: 48: Kirby Drive & North Spectrum Boulevard





Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	78	52	3	912	47	47	912
Future Volume (vph)	78	52	3	912	47	47	912
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%
Storage Length (ft)	150	150	150		150	120	
Storage Lanes	0	0	1		0	1	
Taper Length (ft)	25		25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor							
Frt		0.850		0.993			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	1583	1770	3514	0	1770	3539
Flt Permitted	0.950		0.950			0.219	
Satd. Flow (perm)	1770	1583	1770	3514	0	408	3539
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		57		11			
Link Speed (mph)	30			30			30
Link Distance (ft)	1050			764			1142
Travel Time (s)	23.9			17.4			26.0
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0
Parking (#/hr)							
Mid-Block Traffic (%)	0%			0%			0%
Adj. Flow (vph)	85	57	3	991	51	51	991
Shared Lane Traffic (%)							
Lane Group Flow (vph)	85	57	3	1042	0	51	991
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	R NA	Left	Right	Left	Left
Median Width(ft)	12			12			12
Link Offset(ft)	0			0			0
Crosswalk Width(ft)	16			16			16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9		9	15	
Number of Detectors	1	1	1	2		1	2
Detector Template	Left	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0		0	0
Turn Type	Prot	Perm	Prot	NA		pm+pt	NA
Protected Phases	8		5	2		1	6
Permitted Phases		8				6	
Detector Phase	8	8	5	2		1	6
Switch Phase							

Lanes, Volumes, Timings
49: Kirby Drive & South Spectrum Boulevard

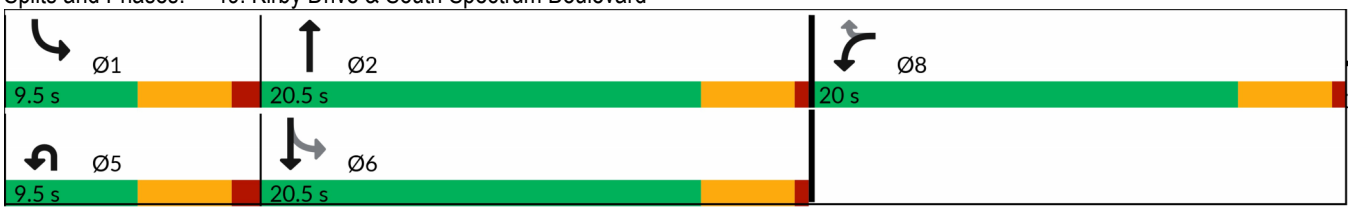
09/16/2024

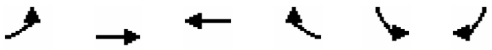
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	4.0	4.0	5.0	4.0		5.0	4.0
Minimum Split (s)	20.0	20.0	9.5	20.0		9.5	20.0
Total Split (s)	20.0	20.0	9.5	20.5		9.5	20.5
Total Split (%)	40.0%	40.0%	19.0%	41.0%		19.0%	41.0%
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	1.0	0.5		1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.0		4.5	4.0
Lead/Lag			Lead	Lag		Lead	Lag
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Recall Mode	None	None	None	Max		None	None
Act Effct Green (s)	7.3	7.3	5.0	25.8		26.2	27.5
Actuated g/C Ratio	0.19	0.19	0.13	0.67		0.68	0.71
v/c Ratio	0.25	0.17	0.01	0.44		0.11	0.39
Control Delay (s/veh)	15.9	6.6	17.0	8.6		4.2	6.3
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	15.9	6.6	17.0	8.6		4.2	6.3
LOS	B	A	B	A		A	A
Approach Delay (s/veh)	12.2			8.7			6.2
Approach LOS	B			A			A
90th %ile Green (s)	9.7	9.7	5.0	16.5		5.0	16.5
90th %ile Term Code	Gap	Gap	Max	MaxR		Max	Max
70th %ile Green (s)	8.2	8.2	0.0	16.5		5.0	26.0
70th %ile Term Code	Gap	Gap	Skip	MaxR		Max	Hold
50th %ile Green (s)	7.0	7.0	0.0	20.7		0.0	20.7
50th %ile Term Code	Gap	Gap	Skip	Dwell		Skip	Dwell
30th %ile Green (s)	0.0	0.0	0.0	31.5		0.0	31.5
30th %ile Term Code	Skip	Skip	Skip	Dwell		Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	31.5		0.0	31.5
10th %ile Term Code	Skip	Skip	Skip	Dwell		Skip	Dwell

Intersection Summary

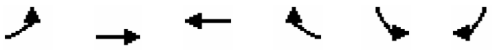
Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 38.5
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay (s/veh): 7.7 Intersection LOS: A
Intersection Capacity Utilization 45.6% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 43.7
70th %ile Actuated Cycle: 42.2
50th %ile Actuated Cycle: 35.7
30th %ile Actuated Cycle: 35.5
10th %ile Actuated Cycle: 35.5

Splits and Phases: 49: Kirby Drive & South Spectrum Boulevard





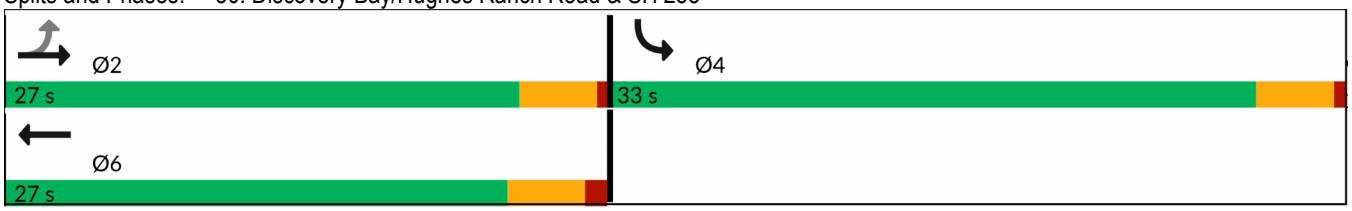
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	192	81	43	68	327	258
Future Volume (vph)	192	81	43	68	327	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	150	150
Storage Lanes	0			0	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.917		0.940	
Flt Protected		0.966			0.973	
Satd. Flow (prot)	0	1799	1708	0	1704	0
Flt Permitted		0.716			0.973	
Satd. Flow (perm)	0	1334	1708	0	1704	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			74		92	
Link Speed (mph)		30	30		30	
Link Distance (ft)		769	312		2088	
Travel Time (s)		17.5	7.1		47.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	209	88	47	74	355	280
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	297	121	0	635	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Turn Type	Perm	NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases	2					
Detector Phase	2	2	6		4	
Switch Phase						

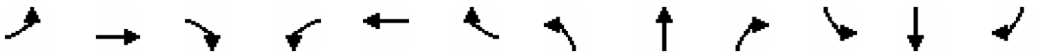


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	4.0	4.0	5.0		4.0	
Minimum Split (s)	20.0	20.0	22.5		20.0	
Total Split (s)	27.0	27.0	27.0		33.0	
Total Split (%)	45.0%	45.0%	45.0%		55.0%	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	1.0		0.5	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.0	4.5		4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max		None	
Act Effct Green (s)		23.3	22.8		22.0	
Actuated g/C Ratio		0.44	0.43		0.41	
v/c Ratio		0.51	0.16		0.84	
Control Delay (s/veh)		16.8	6.5		23.1	
Queue Delay		0.0	0.0		0.0	
Total Delay (s/veh)		16.8	6.5		23.1	
LOS		B	A		C	
Approach Delay (s/veh)		16.8	6.5		23.1	
Approach LOS		B	A		C	
90th %ile Green (s)	23.0	23.0	22.5		29.0	
90th %ile Term Code	Max	Max	MaxR		Max	
70th %ile Green (s)	23.0	23.0	22.5		29.0	
70th %ile Term Code	Hold	Hold	MaxR		Max	
50th %ile Green (s)	23.0	23.0	22.5		22.7	
50th %ile Term Code	Hold	Hold	MaxR		Gap	
30th %ile Green (s)	23.0	23.0	22.5		18.2	
30th %ile Term Code	Hold	Hold	MaxR		Gap	
10th %ile Green (s)	23.0	23.0	22.5		13.1	
10th %ile Term Code	Hold	Hold	MaxR		Gap	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 53.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 19.4		Intersection LOS: B	
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 60			
70th %ile Actuated Cycle: 60			
50th %ile Actuated Cycle: 53.7			
30th %ile Actuated Cycle: 49.2			
10th %ile Actuated Cycle: 44.1			

Splits and Phases: 50: Discovery Bay/Hughes Ranch Road & SH 288





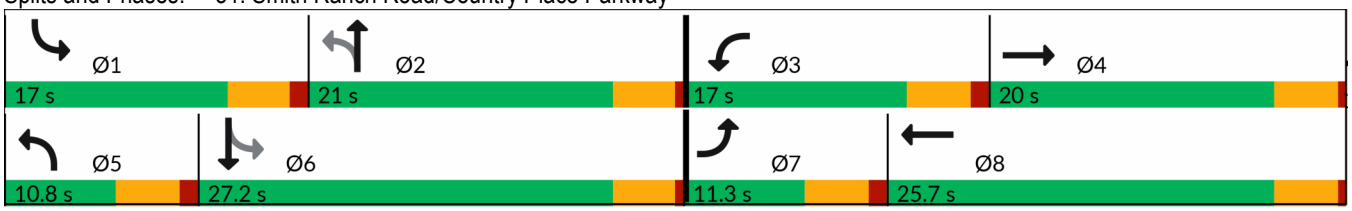
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	441	4	216	352	86	102	163	151	358	397	21
Future Volume (vph)	56	441	4	216	352	86	102	163	151	358	397	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	220		150	150		40	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.999			0.971			0.928			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3536	0	1770	3437	0	1770	3284	0	1770	3511	0
Flt Permitted	0.950			0.950			0.490			0.380		
Satd. Flow (perm)	1770	3536	0	1770	3437	0	913	3284	0	708	3511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			40			164			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		215			3362			510			402	
Travel Time (s)		4.9			76.4			11.6			9.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	61	479	4	235	383	93	111	177	164	389	432	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	483	0	235	476	0	111	341	0	389	455	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
51: Smith Ranch Road/Country Place Parkway 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	11.3	20.0		17.0	25.7		10.8	21.0		17.0	27.2	
Total Split (%)	15.1%	26.7%		22.7%	34.3%		14.4%	28.0%		22.7%	36.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	6.5	14.3		12.0	24.3		22.7	17.0		33.3	25.3	
Actuated g/C Ratio	0.09	0.20		0.17	0.33		0.31	0.23		0.46	0.35	
v/c Ratio	0.39	0.69		0.80	0.41		0.31	0.38		0.77	0.37	
Control Delay (s/veh)	39.6	32.9		52.2	19.4		15.5	13.7		27.4	20.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	39.6	32.9		52.2	19.4		15.5	13.7		27.4	20.0	
LOS	D	C		D	B		B	B		C	B	
Approach Delay (s/veh)		33.6			30.3			14.2			23.4	
Approach LOS		C			C			B			C	
90th %ile Green (s)	6.8	16.0		12.5	21.7		6.3	17.0		12.5	23.2	
90th %ile Term Code	Max	Max		Max	Hold		Max	MaxR		Max	Hold	
70th %ile Green (s)	6.8	16.0		12.5	21.7		6.3	17.0		12.5	23.2	
70th %ile Term Code	Max	Max		Max	Hold		Max	MaxR		Max	Hold	
50th %ile Green (s)	6.8	16.0		12.5	21.7		6.3	17.0		12.5	23.2	
50th %ile Term Code	Max	Max		Max	Hold		Max	MaxR		Max	Hold	
30th %ile Green (s)	0.0	13.3		12.5	30.3		6.3	17.0		12.5	23.2	
30th %ile Term Code	Skip	Gap		Max	Hold		Max	MaxR		Max	Hold	
10th %ile Green (s)	0.0	10.7		10.1	25.3		0.0	17.0		11.1	32.6	
10th %ile Term Code	Skip	Gap		Gap	Hold		Skip	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 72.6			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay (s/veh): 25.9		Intersection LOS: C	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 75			
70th %ile Actuated Cycle: 75			
50th %ile Actuated Cycle: 75			
30th %ile Actuated Cycle: 72.3			
10th %ile Actuated Cycle: 65.9			

Splits and Phases: 51: Smith Ranch Road/Country Place Parkway

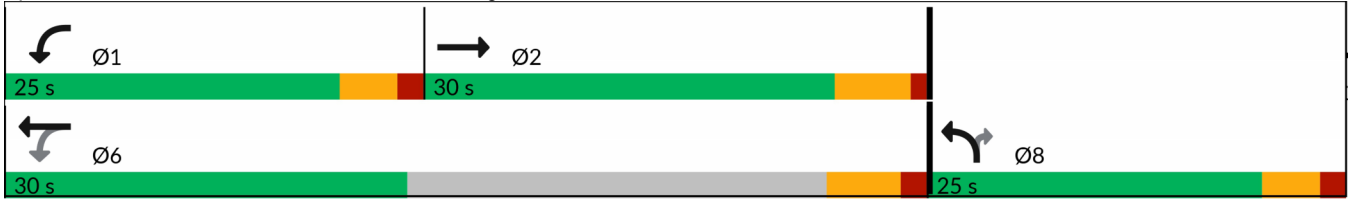


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	474	376	197	357	240	136
Future Volume (vph)	474	376	197	357	240	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	120		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.934					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3306	0	1770	3539	1770	1583
Flt Permitted			0.158		0.950	
Satd. Flow (perm)	3306	0	294	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	258					148
Link Speed (mph)	30			30	30	
Link Distance (ft)	3362			2489	974	
Travel Time (s)	76.4			56.6	22.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	515	409	214	388	261	148
Shared Lane Traffic (%)						
Lane Group Flow (vph)	924	0	214	388	261	148
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	11.0		4.0	11.0	5.0	5.0
Minimum Split (s)	25.0		20.0	25.0	21.0	21.0
Total Split (s)	30.0		25.0	30.0	25.0	25.0
Total Split (%)	37.5%		31.3%	37.5%	31.3%	31.3%
Yellow Time (s)	4.5		3.5	4.5	3.5	3.5
All-Red Time (s)	1.0		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	Max	Max
Act Effct Green (s)	20.8		36.3	35.3	20.2	20.2
Actuated g/C Ratio	0.31		0.55	0.53	0.30	0.30
v/c Ratio	0.76		0.56	0.21	0.49	0.25
Control Delay (s/veh)	19.5		14.5	8.2	24.4	5.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.5		14.5	8.2	24.4	5.5
LOS	B		B	A	C	A
Approach Delay (s/veh)	19.5			10.4	17.6	
Approach LOS	B			B	B	
90th %ile Green (s)	24.5		14.5	43.5	20.0	20.0
90th %ile Term Code	Max		Gap	Hold	MaxR	MaxR
70th %ile Green (s)	24.5		11.0	40.0	20.0	20.0
70th %ile Term Code	Max		Gap	Hold	MaxR	MaxR
50th %ile Green (s)	22.8		9.6	36.9	20.0	20.0
50th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
30th %ile Green (s)	18.9		8.5	31.9	20.0	20.0
30th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
10th %ile Green (s)	14.3		7.0	25.8	20.0	20.0
10th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 66.6	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 16.3	Intersection LOS: B
Intersection Capacity Utilization 62.3%	ICU Level of Service B
Analysis Period (min) 15	
90th %ile Actuated Cycle: 74.5	
70th %ile Actuated Cycle: 71	
50th %ile Actuated Cycle: 67.9	
30th %ile Actuated Cycle: 62.9	
10th %ile Actuated Cycle: 56.8	

Splits and Phases: 52: Miller Ranch Road & Hughes Ranch Road

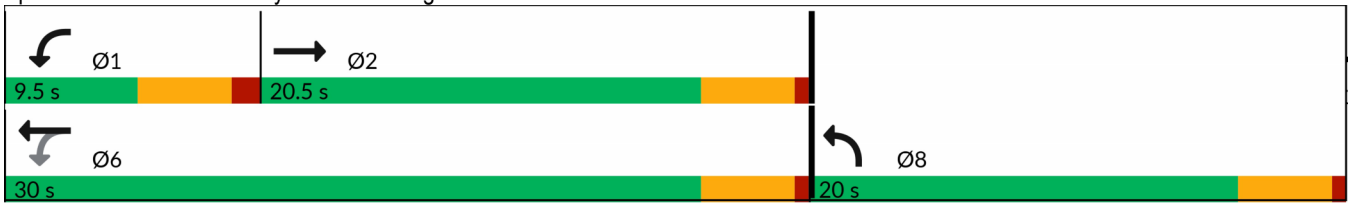


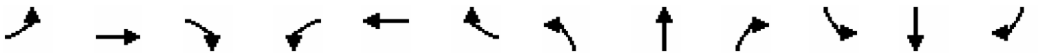
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	635	3	3	557	0	4
Future Volume (vph)	635	3	3	557	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	80		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.865	
Flt Protected			0.950			
Satd. Flow (prot)	3536	0	1770	3539	1611	0
Flt Permitted			0.341			
Satd. Flow (perm)	3536	0	635	3539	1611	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	1				305	
Link Speed (mph)	30			30	30	
Link Distance (ft)	2489			1502	641	
Travel Time (s)	56.6			34.1	14.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	690	3	3	605	0	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	693	0	3	605	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	4.0		5.0	4.0	4.0	
Minimum Split (s)	20.0		9.5	20.0	20.0	
Total Split (s)	20.5		9.5	30.0	20.0	
Total Split (%)	41.0%		19.0%	60.0%	40.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.5	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max		None	None	None	
Act Effct Green (s)	36.0		33.3	37.4	5.7	
Actuated g/C Ratio	0.92		0.85	0.95	0.15	
v/c Ratio	0.21		0.00	0.18	0.01	
Control Delay (s/veh)	2.0		1.3	0.8	0.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	2.0		1.3	0.8	0.0	
LOS	A		A	A	A	
Approach Delay (s/veh)	2.0			0.8		
Approach LOS	A			A		
90th %ile Green (s)	31.5		5.0	41.0	5.5	
90th %ile Term Code	Dwell		Max	Dwell	Gap	
70th %ile Green (s)	31.5		0.0	31.5	0.0	
70th %ile Term Code	Dwell		Skip	Dwell	Skip	
50th %ile Green (s)	31.5		0.0	31.5	0.0	
50th %ile Term Code	Dwell		Skip	Dwell	Skip	
30th %ile Green (s)	31.5		0.0	31.5	0.0	
30th %ile Term Code	Dwell		Skip	Dwell	Skip	
10th %ile Green (s)	31.5		0.0	31.5	0.0	
10th %ile Term Code	Dwell		Skip	Dwell	Skip	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 39.3			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.21			
Intersection Signal Delay (s/veh): 1.4		Intersection LOS: A	
Intersection Capacity Utilization 27.6%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 54.5			
70th %ile Actuated Cycle: 35.5			
50th %ile Actuated Cycle: 35.5			
30th %ile Actuated Cycle: 35.5			
10th %ile Actuated Cycle: 35.5			

Splits and Phases: 53: Bryan Court & Hughes Ranch Road





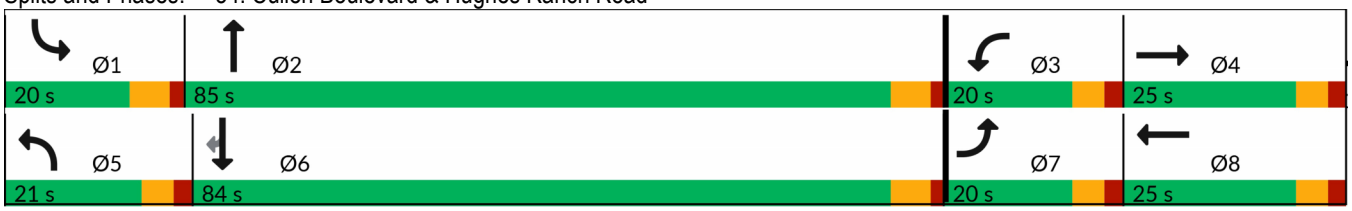
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	132	271	34	133	73	200	1041	53	71	1550	164
Future Volume (vph)	110	132	271	34	133	73	200	1041	53	71	1550	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		150	80		150	330		150	330		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.98											
Frt		0.899			0.947			0.993				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3182	0	1770	3352	0	1770	3514	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1737	3182	0	1770	3352	0	1770	3514	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		244			56			5				102
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3319			5457			763			632	
Travel Time (s)		75.4			124.0			17.3			14.4	
Confl. Peds. (#/hr)	9											
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	120	143	295	37	145	79	217	1132	58	77	1685	178
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	438	0	37	224	0	217	1190	0	77	1685	178
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												

Lanes, Volumes, Timings
54: Cullen Boulevard & Hughes Ranch Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	7.0
Minimum Split (s)	20.0	25.0		20.0	25.0		20.0	45.0		20.0	45.0	45.0
Total Split (s)	20.0	25.0		20.0	25.0		21.0	85.0		20.0	84.0	84.0
Total Split (%)	13.3%	16.7%		13.3%	16.7%		14.0%	56.7%		13.3%	56.0%	56.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	4.5		4.5	4.5	4.5
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.5		5.5	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max		None	None	None
Act Effct Green (s)	13.2	19.6		8.4	12.5		15.5	82.0		11.1	78.1	78.1
Actuated g/C Ratio	0.09	0.14		0.06	0.09		0.11	0.58		0.08	0.55	0.55
v/c Ratio	0.73	0.67		0.36	0.65		1.12	0.59		0.56	1.64	0.19
Control Delay (s/veh)	88.2	31.5		74.1	55.7		157.2	21.4		79.0	320.1	7.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	88.2	31.5		74.1	55.7		157.2	21.4		79.0	320.1	7.9
LOS	F	C		E	E		F	C		E	F	A
Approach Delay (s/veh)		43.7			58.3			42.3			281.9	
Approach LOS		D			E			D			F	
90th %ile Green (s)	14.5	19.8		11.6	16.9		15.5	79.0		14.0	78.0	78.0
90th %ile Term Code	Max	Hold		Gap	Gap		Max	MaxR		Max	Max	Max
70th %ile Green (s)	14.5	19.1		9.7	14.3		15.5	79.5		13.5	78.0	78.0
70th %ile Term Code	Max	Hold		Gap	Gap		Max	Hold		Gap	Max	Max
50th %ile Green (s)	14.5	18.7		8.4	12.6		15.5	81.5		11.5	78.0	78.0
50th %ile Term Code	Max	Hold		Gap	Gap		Max	Hold		Gap	Max	Max
30th %ile Green (s)	12.9	16.7		7.1	10.9		15.5	83.4		9.6	78.0	78.0
30th %ile Term Code	Gap	Hold		Gap	Gap		Max	Hold		Gap	Max	Max
10th %ile Green (s)	9.6	23.5		0.0	8.4		15.5	85.9		7.1	78.0	78.0
10th %ile Term Code	Gap	Hold		Skip	Gap		Max	Hold		Gap	Max	Max

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 141.8			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.64			
Intersection Signal Delay (s/veh): 155.1		Intersection LOS: F	
Intersection Capacity Utilization 127.1%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 147.4			
70th %ile Actuated Cycle: 144.8			
50th %ile Actuated Cycle: 143.1			
30th %ile Actuated Cycle: 139.8			
10th %ile Actuated Cycle: 134			

Splits and Phases: 54: Cullen Boulevard & Hughes Ranch Road





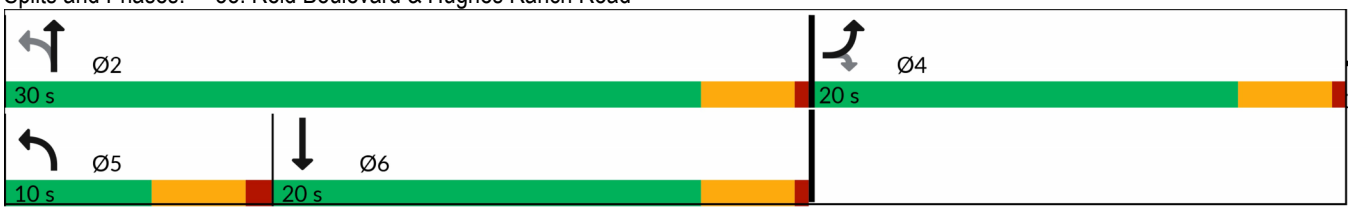
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	228	184	154	213	21
Future Volume (vph)	28	228	184	154	213	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	500	150	150			150
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor						
Frt		0.850			0.986	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3490	0
Flt Permitted	0.950		0.484			
Satd. Flow (perm)	1770	1583	902	3539	3490	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		248			22	
Link Speed (mph)	30			30	30	
Link Distance (ft)	5457			901	567	
Travel Time (s)	124.0			20.5	12.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	30	248	200	167	232	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	248	200	167	255	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Detector Phase	4	4	5	2	6	
Switch Phase						

Lanes, Volumes, Timings
55: Reid Boulevard & Hughes Ranch Road 09/16/2024

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Initial (s)	4.0	4.0	5.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	9.5	20.0	20.0	
Total Split (s)	20.0	20.0	10.0	30.0	20.0	
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	1.0	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	Max	None	
Act Effct Green (s)	7.2	7.2	27.8	28.3	19.9	
Actuated g/C Ratio	0.17	0.17	0.64	0.65	0.46	
v/c Ratio	0.10	0.53	0.29	0.07	0.16	
Control Delay (s/veh)	14.8	7.3	4.9	3.4	8.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	14.8	7.3	4.9	3.4	8.1	
LOS	B	A	A	A	A	
Approach Delay (s/veh)	8.1			4.2	8.1	
Approach LOS	A			A	A	
90th %ile Green (s)	10.8	10.8	5.5	26.0	16.0	
90th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
70th %ile Green (s)	7.5	7.5	5.5	26.0	16.0	
70th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
50th %ile Green (s)	6.1	6.1	5.5	26.0	16.0	
50th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
30th %ile Green (s)	5.6	5.6	5.5	26.0	16.0	
30th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
10th %ile Green (s)	5.5	5.5	0.0	38.1	38.1	
10th %ile Term Code	Gap	Gap	Skip	Dwell	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 43.5			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay (s/veh): 6.5		Intersection LOS: A	
Intersection Capacity Utilization 30.1%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 44.8			
70th %ile Actuated Cycle: 41.5			
50th %ile Actuated Cycle: 40.1			
30th %ile Actuated Cycle: 39.6			
10th %ile Actuated Cycle: 51.6			

Splits and Phases: 55: Reid Boulevard & Hughes Ranch Road





Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1569	97		395	
Travel Time (s)		35.7	2.2		9.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	0	0	-	0	1	0
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	-	0	1022	-
Stage 1	-	-	-	0	-	-
Stage 2	-	-	-	0	1022	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	-	-	-	1022	-
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	1022	-

Approach	SE	NW	SW
HCM Control Delay, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NWT	SEL	SETSWLn1	
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	-	0	-	0
HCM Lane LOS	-	A	-	A
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	33	0	0	3039	43
Future Volume (vph)	0	33	0	0	3039	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Ped Bike Factor						
Frt		0.865				0.850
Flt Protected						
Satd. Flow (prot)	0	1611	0	0	3539	1583
Flt Permitted						
Satd. Flow (perm)	0	1611	0	0	3539	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	216			500	772	
Travel Time (s)	4.9			11.4	17.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	36	0	0	3303	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	36	0	0	3303	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

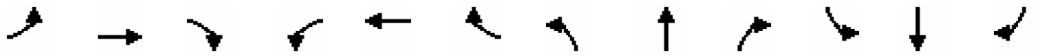
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	0	0	3039	43
Future Vol, veh/h	0	33	0	0	3039	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	-	-	-	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	36	0	0	3303	47

Major/Minor	Minor2			Major2	
Conflicting Flow All	-	1652		-	0
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	6.94		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	3.32		-	-
Pot Cap-1 Maneuver	0	87		-	0
Stage 1	0	-		-	0
Stage 2	0	-		-	0
Platoon blocked, %				-	
Mov Cap-1 Maneuver	-	87		-	-
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	SB
HCM Control Delay, s/v	72.19	0
HCM LOS	F	

Minor Lane/Major Mvmt	EBLn1	SBT
Capacity (veh/h)	87	-
HCM Lane V/C Ratio	0.41	-
HCM Control Delay (s/veh)	72.2	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	1.7	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Future Volume (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.925			0.925			0.925			0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3274	0	1770	3274	0	1770	1723	0	1770	1723	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3274	0	1770	3274	0	1770	1723	0	1770	1723	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3590			2239			733			785	
Travel Time (s)		81.6			50.9			16.7			17.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	2	0	1	2	0	1	2	0	1	2	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

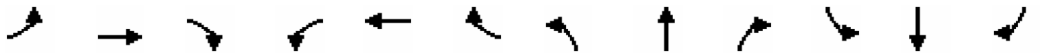
Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	1	1	1	1	1	1	1	1	1
Future Vol, veh/h	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1	1	1	1	1	1	1	1	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2	0	0	2	0	0	7	8	1	7	8	1
Stage 1	-	-	-	-	-	-	4	4	-	4	4	-
Stage 2	-	-	-	-	-	-	3	4	-	3	4	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1619	-	-	1619	-	-	1011	886	1083	1011	886	1083
Stage 1	-	-	-	-	-	-	1018	892	-	1018	892	-
Stage 2	-	-	-	-	-	-	1018	892	-	1018	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1619	-	-	1619	-	-	1008	885	1083	1008	885	1083
Mov Cap-2 Maneuver	-	-	-	-	-	-	1008	885	-	1008	885	-
Stage 1	-	-	-	-	-	-	1017	892	-	1017	892	-
Stage 2	-	-	-	-	-	-	1015	891	-	1015	891	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	2.41	2.41	8.66	8.66
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1008	974	1619	-	-	1619	-	-	1008	974
HCM Lane V/C Ratio	0.001	0.002	0.001	-	-	0.001	-	-	0.001	0.002
HCM Control Delay (s/veh)	8.6	8.7	7.2	-	-	7.2	-	-	8.6	8.7
HCM Lane LOS	A	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	0	-	-	0	-	-	0	0



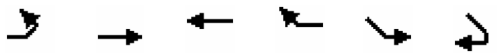
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	3539	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	3539	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2249			1942			317			367	
Travel Time (s)		51.1			44.1			7.2			8.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



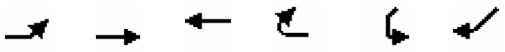
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	150		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		0	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1502			3319	640	
Travel Time (s)	34.1			75.4	14.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



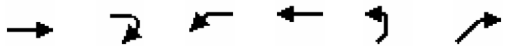
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			2	0	0
Taper Length (ft)	0				0	
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	0	3278	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	0	3278	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1127	334		1418	
Travel Time (s)		25.6	7.6		32.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



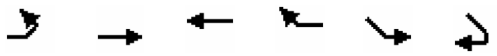
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	15	0	0	0	9
Future Volume (vph)	0	15	0	0	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	0	2
Taper Length (ft)	0				0	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.88
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	3539	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	0	3539	0	0	0	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	683		720	
Travel Time (s)		5.3	15.5		16.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	16	0	0	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	16	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		20	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		0	0		0	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



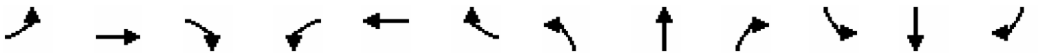
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	312			213	239	
Travel Time (s)	7.1			4.8	5.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	1863	1863	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	1863	1863	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		213	215		156	
Travel Time (s)		4.8	4.9		3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	6	0	18	0	1599	3	3	2231	1
Future Volume (vph)	1	1	1	6	0	18	0	1599	3	3	2231	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	120		150
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	0			0			50			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor												
Frt			0.850		0.900							0.850
Flt Protected		0.976			0.987					0.950		
Satd. Flow (prot)	0	1818	1583	0	1655	0	1863	5085	0	1770	5085	1583
Flt Permitted		0.976			0.987					0.950		
Satd. Flow (perm)	0	1818	1583	0	1655	0	1863	5085	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		106							106
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		769			683			1825			845	
Travel Time (s)		17.5			15.5			41.5			19.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	1	1	7	0	20	0	1738	3	3	2425	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	1	0	27	0	0	1741	0	3	2425	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												

Lanes, Volumes, Timings
1: SH 35/SH35 & Flex Market

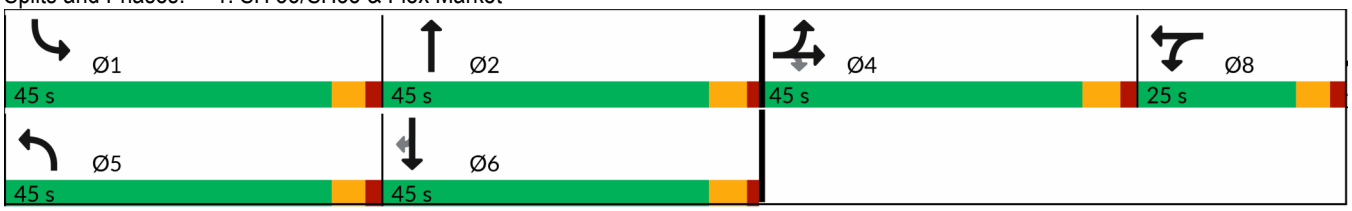
09/16/2024

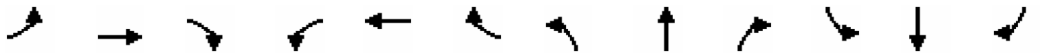
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0	3.0	3.0	3.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	25.0	25.0	25.0	22.0	22.0		25.0	45.0		25.0	45.0	45.0
Total Split (s)	45.0	45.0	45.0	25.0	25.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	28.1%	28.1%	28.1%	15.6%	15.6%		28.1%	28.1%		28.1%	28.1%	28.1%
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0		4.0	4.5		4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		2.0	1.5	1.5
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	Max		None	None	None
Act Effct Green (s)		5.7	5.7		5.6			56.8		5.8	58.8	58.8
Actuated g/C Ratio		0.09	0.09		0.08			0.85		0.09	0.88	0.88
v/c Ratio		0.01	0.00		0.11			0.40		0.02	0.54	0.00
Control Delay (s/veh)		33.5	0.0		1.0			5.4		33.3	4.3	0.0
Queue Delay		0.0	0.0		0.0			0.0		0.0	0.0	0.0
Total Delay (s/veh)		33.5	0.0		1.0			5.4		33.3	4.3	0.0
LOS		C	A		A			A		C	A	A
Approach Delay (s/veh)		22.3			1.0			5.4			4.3	
Approach LOS		C			A			A			A	
90th %ile Green (s)	5.9	5.9	5.9	5.5	5.5		0.0	40.8		6.1	52.9	52.9
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip	Dwell		Gap	Dwell	Dwell
70th %ile Green (s)	0.0	0.0	0.0	5.5	5.5		0.0	54.0		0.0	54.0	54.0
70th %ile Term Code	Skip	Skip	Skip	Gap	Gap		Skip	Dwell		Skip	Dwell	Dwell
50th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
50th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell
30th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
30th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	54.0		0.0	54.0	54.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	Dwell

Intersection Summary

Area Type: Other
Cycle Length: 160
Actuated Cycle Length: 66.9
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.54
Intersection Signal Delay (s/veh): 4.8 Intersection LOS: A
Intersection Capacity Utilization 65.2% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 82.8
70th %ile Actuated Cycle: 71.5
50th %ile Actuated Cycle: 60
30th %ile Actuated Cycle: 60
10th %ile Actuated Cycle: 60

Splits and Phases: 1: SH 35/SH35 & Flex Market





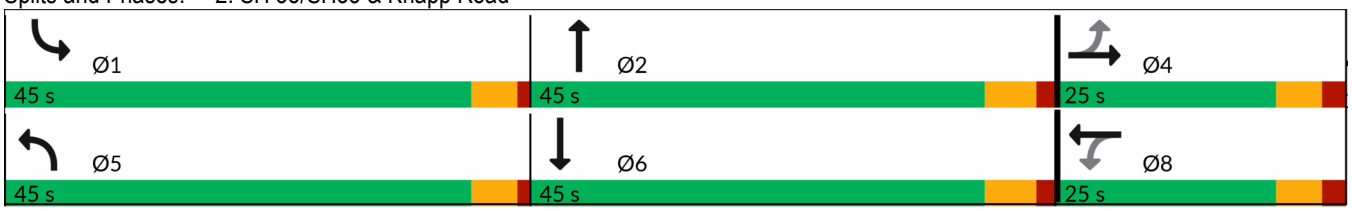
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	0	1	25	0	86	3	1452	30	151	2127	9
Future Volume (vph)	22	0	1	25	0	86	3	1452	30	151	2127	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	500		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.995			0.895			0.997			0.999	
Flt Protected		0.954			0.989		0.950			0.950		
Satd. Flow (prot)	0	1768	0	0	1649	0	1770	5070	0	1770	5080	0
Flt Permitted		0.640			0.915		0.950			0.950		
Satd. Flow (perm)	0	1186	0	0	1525	0	1770	5070	0	1770	5080	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			93			3			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			854			3282			1825	
Travel Time (s)		9.6			19.4			74.6			41.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	24	0	1	27	0	93	3	1578	33	164	2312	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	120	0	3	1611	0	164	2322	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

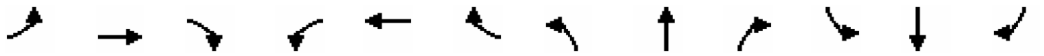
Lanes, Volumes, Timings
2: SH 35/SH35 & Knapp Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		25.0	45.0		25.0	45.0	
Total Split (s)	25.0	25.0		25.0	25.0		45.0	45.0		45.0	45.0	
Total Split (%)	21.7%	21.7%		21.7%	21.7%		39.1%	39.1%		39.1%	39.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		5.0	6.0		5.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)		7.5			7.5		5.7	40.3		12.5	55.7	
Actuated g/C Ratio		0.10			0.10		0.07	0.52		0.16	0.72	
v/c Ratio		0.14			0.52		0.02	0.61		0.58	0.63	
Control Delay (s/veh)		1.6			20.1		35.7	15.1		38.4	7.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		1.6			20.1		35.7	15.1		38.4	7.6	
LOS		A			C		D	B		D	A	
Approach Delay (s/veh)		1.6			20.1			15.1			9.7	
Approach LOS		A			C			B			A	
90th %ile Green (s)	11.5	11.5		11.5	11.5		6.2	39.0		17.6	50.4	
90th %ile Term Code	Hold	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	8.6	8.6		8.6	8.6		0.0	39.0		14.2	58.2	
70th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
50th %ile Green (s)	6.8	6.8		6.8	6.8		0.0	39.0		12.2	56.2	
50th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
30th %ile Green (s)	5.5	5.5		5.5	5.5		0.0	39.0		10.4	54.4	
30th %ile Term Code	Hold	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	5.5	5.5		5.5	5.5		0.0	44.6		8.4	58.0	
10th %ile Term Code	Hold	Hold		Gap	Gap		Skip	Dwell		Gap	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 77.3			
Natural Cycle: 95			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 12.0		Intersection LOS: B	
Intersection Capacity Utilization 65.8%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 85.1			
70th %ile Actuated Cycle: 78.8			
50th %ile Actuated Cycle: 75			
30th %ile Actuated Cycle: 71.9			
10th %ile Actuated Cycle: 75.5			

Splits and Phases: 2: SH 35/SH35 & Knapp Road





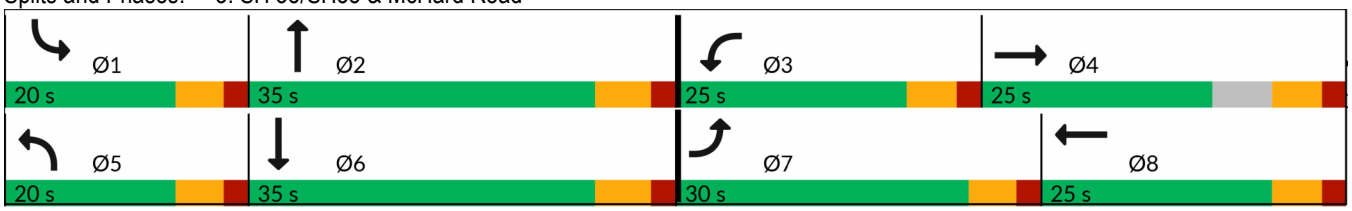
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	287	617	298	222	622	62	250	1115	173	231	1560	506
Future Volume (vph)	287	617	298	222	622	62	250	1115	173	231	1560	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	200		150	150		150	500		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.951			0.986			0.980			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3366	0	1770	3490	0	1770	4984	0	1770	4897	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3366	0	1770	3490	0	1770	4984	0	1770	4897	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68			8			26			72	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1207			2764			3429			3282	
Travel Time (s)		27.4			62.8			77.9			74.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	312	671	324	241	676	67	272	1212	188	251	1696	550
Shared Lane Traffic (%)												
Lane Group Flow (vph)	312	995	0	241	743	0	272	1400	0	251	2246	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

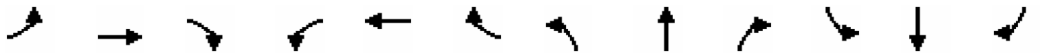
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	8.0		3.0	8.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	20.0	24.0		15.0	24.0		15.0	30.0		15.0	30.0	
Total Split (s)	30.0	25.0		25.0	25.0		20.0	35.0		20.0	35.0	
Total Split (%)	27.3%	22.7%		22.7%	22.7%		18.2%	31.8%		18.2%	31.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.5		6.0	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	22.0	23.4		17.6	19.0		14.0	28.5		14.0	28.5	
Actuated g/C Ratio	0.20	0.22		0.16	0.18		0.13	0.26		0.13	0.26	
v/c Ratio	0.87	1.27		0.84	1.20		1.19	1.05		1.10	1.67	
Control Delay (s/veh)	65.7	166.3		69.0	143.2		161.2	77.2		132.2	332.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	65.7	166.3		69.0	143.2		161.2	77.2		132.2	332.4	
LOS	E	F		E	F		F	E		F	F	
Approach Delay (s/veh)		142.3			125.0			90.8			312.3	
Approach LOS		F			F			F			F	
90th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	28.5		14.0	28.5	
90th %ile Term Code	Max	Hold		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	28.5		14.0	28.5	
70th %ile Term Code	Max	Hold		Max	Max		Max	MaxR		Max	MaxR	
50th %ile Green (s)	24.0	24.0		19.0	19.0		14.0	28.5		14.0	28.5	
50th %ile Term Code	Max	Hold		Max	Max		Max	MaxR		Max	MaxR	
30th %ile Green (s)	21.6	22.9		17.7	19.0		14.0	28.5		14.0	28.5	
30th %ile Term Code	Gap	Hold		Gap	Max		Max	MaxR		Max	MaxR	
10th %ile Green (s)	16.6	22.2		13.4	19.0		14.0	28.5		14.0	28.5	
10th %ile Term Code	Gap	Hold		Gap	Max		Max	MaxR		Max	MaxR	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 108
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.67
Intersection Signal Delay (s/veh): 192.1 Intersection LOS: F
Intersection Capacity Utilization 114.6% ICU Level of Service H
Analysis Period (min) 15
90th %ile Actuated Cycle: 110
70th %ile Actuated Cycle: 110
50th %ile Actuated Cycle: 110
30th %ile Actuated Cycle: 107.6
10th %ile Actuated Cycle: 102.6

Splits and Phases: 3: SH 35/SH35 & McHard Road



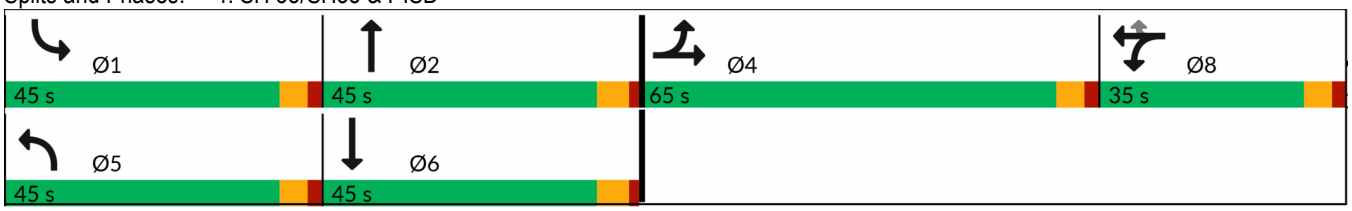


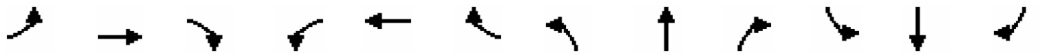
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	3	58	280	0	56	21	1184	262	154	1893	1
Future Volume (vph)	33	3	58	280	0	56	21	1184	262	154	1893	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	120		0	180		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.917				0.850		0.973				
Flt Protected		0.983			0.950		0.950			0.950		
Satd. Flow (prot)	0	1679	0	0	1770	1583	1770	4948	0	1770	5085	0
Flt Permitted		0.983			0.950		0.950			0.950		
Satd. Flow (perm)	0	1679	0	0	1770	1583	1770	4948	0	1770	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44				86		23				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		568			482			1254			3429	
Travel Time (s)		12.9			11.0			28.5			77.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	3	63	304	0	61	23	1287	285	167	2058	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	102	0	0	304	61	23	1572	0	167	2059	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	0	1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	0	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		5.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0		25.0	25.0	25.0	25.0	45.0		25.0	24.0	
Total Split (s)	65.0	65.0		35.0	35.0	35.0	45.0	45.0		45.0	45.0	
Total Split (%)	34.2%	34.2%		18.4%	18.4%	18.4%	23.7%	23.7%		23.7%	23.7%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	1.5		2.0	1.5	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Act Effct Green (s)		11.2			29.1	29.1	7.1	39.1		16.5	53.5	
Actuated g/C Ratio		0.09			0.24	0.24	0.06	0.33		0.14	0.45	
v/c Ratio		0.52			0.71	0.14	0.22	0.97		0.68	0.91	
Control Delay (s/veh)		41.0			52.9	4.3	60.3	55.3		64.2	39.1	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		41.0			52.9	4.3	60.3	55.3		64.2	39.1	
LOS		D			D	A	E	E		E	D	
Approach Delay (s/veh)		41.0			44.8			55.4			41.0	
Approach LOS		D			D			E			D	
90th %ile Green (s)	14.7	14.7		29.0	29.0	29.0	9.2	39.0		22.6	52.4	
90th %ile Term Code	Gap	Gap		Max	Max	Max	Gap	MaxR		Gap	Hold	
70th %ile Green (s)	11.7	11.7		29.0	29.0	29.0	7.9	39.0		18.8	49.9	
70th %ile Term Code	Gap	Gap		Max	Max	Max	Gap	MaxR		Gap	Hold	
50th %ile Green (s)	10.0	10.0		29.0	29.0	29.0	7.0	39.0		16.4	48.4	
50th %ile Term Code	Min	Min		Max	Max	Max	Gap	MaxR		Gap	Hold	
30th %ile Green (s)	10.0	10.0		29.0	29.0	29.0	0.0	39.0		14.2	59.2	
30th %ile Term Code	Min	Min		Max	Max	Max	Skip	MaxR		Gap	Hold	
10th %ile Green (s)	10.0	10.0		29.0	29.0	29.0	0.0	39.0		11.4	56.4	
10th %ile Term Code	Min	Min		Max	Max	Max	Skip	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 190			
Actuated Cycle Length: 120			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 46.7		Intersection LOS: D	
Intersection Capacity Utilization 77.1%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 129.3			
70th %ile Actuated Cycle: 122.5			
50th %ile Actuated Cycle: 118.4			
30th %ile Actuated Cycle: 116.2			
10th %ile Actuated Cycle: 113.4			

Splits and Phases: 4: SH 35/SH35 & PISD





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	112	144	110	155	110	115	155	110	133	1054	62
Future Volume (vph)	170	112	144	110	155	110	115	155	110	133	1054	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	200		100	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor												
Frt		0.916			0.937			0.937			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1706	0	1770	1745	0	1770	4765	0	1770	5045	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1706	0	1770	1745	0	1770	4765	0	1770	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			18			81			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2722			832			2002			1254	
Travel Time (s)		61.9			18.9			45.5			28.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	185	122	157	120	168	120	125	168	120	145	1146	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	279	0	120	288	0	125	288	0	145	1213	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
5: SH 35 & W Orange Street

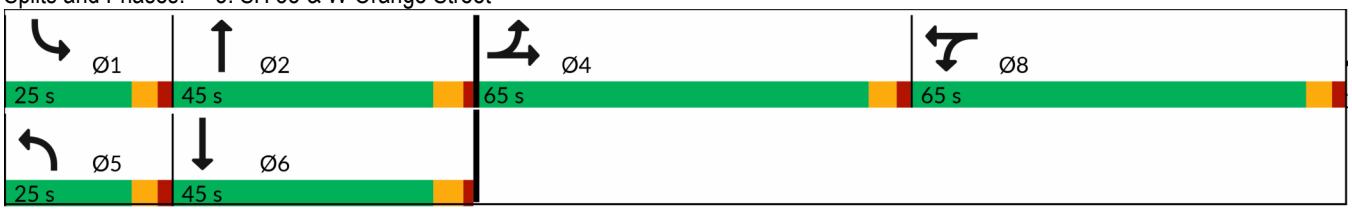
09/16/2024

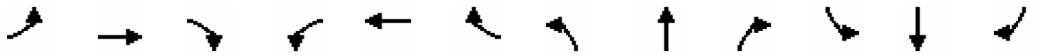
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		5.0	5.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	45.0	45.0		25.0	25.0		20.0	45.0		25.0	45.0	
Total Split (s)	65.0	65.0		65.0	65.0		25.0	45.0		25.0	45.0	
Total Split (%)	32.5%	32.5%		32.5%	32.5%		12.5%	22.5%		12.5%	22.5%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.5		4.0	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.5		2.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	26.1	26.1		27.3	27.3		15.2	39.7		17.0	41.5	
Actuated g/C Ratio	0.19	0.19		0.20	0.20		0.11	0.30		0.13	0.31	
v/c Ratio	0.54	0.78		0.34	0.78		0.63	0.20		0.65	0.78	
Control Delay (s/veh)	55.9	61.9		49.7	63.9		74.3	28.3		73.3	48.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	55.9	61.9		49.7	63.9		74.3	28.3		73.3	48.4	
LOS	E	E		D	E		E	C		E	D	
Approach Delay (s/veh)		59.5			59.7			42.2			51.1	
Approach LOS		E			E			D			D	
90th %ile Green (s)	39.0	39.0		40.2	40.2		19.0	39.0		19.0	39.0	
90th %ile Term Code	Gap	Gap		Gap	Gap		Max	MaxR		Max	MaxR	
70th %ile Green (s)	31.3	31.3		32.5	32.5		18.9	39.0		19.0	39.1	
70th %ile Term Code	Gap	Gap		Gap	Gap		Gap	MaxR		Max	Hold	
50th %ile Green (s)	25.5	25.5		26.7	26.7		15.7	39.0		18.7	42.0	
50th %ile Term Code	Gap	Gap		Gap	Gap		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	21.5	21.5		22.6	22.6		13.2	39.0		15.8	41.6	
30th %ile Term Code	Gap	Gap		Gap	Gap		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	16.0	16.0		17.1	17.1		10.1	39.0		12.4	41.3	
10th %ile Term Code	Gap	Gap		Gap	Gap		Gap	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 200
Actuated Cycle Length: 134.5
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay (s/veh): 52.5 Intersection LOS: D
Intersection Capacity Utilization 72.4% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 161.2
70th %ile Actuated Cycle: 145.8
50th %ile Actuated Cycle: 133.9
30th %ile Actuated Cycle: 122.9
10th %ile Actuated Cycle: 108.5

Splits and Phases: 5: SH 35 & W Orange Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	263	588	218	184	856	73	256	856	99	170	927	321
Future Volume (vph)	263	588	218	184	856	73	256	856	99	170	927	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	380		0	180		0	180		160
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.959			0.988			0.984			0.961	
Flt Protected	0.950			0.950	0.999		0.950			0.950		
Satd. Flow (prot)	1770	3394	0	1610	3346	0	1770	3483	0	1770	3401	0
Flt Permitted	0.950			0.950	0.999		0.950			0.950		
Satd. Flow (perm)	1770	3394	0	1610	3346	0	1770	3483	0	1770	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			5			10			38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4203			1078			2138			5584	
Travel Time (s)		95.5			24.5			48.6			126.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	286	639	237	200	930	79	278	930	108	185	1008	349
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	286	876	0	180	1029	0	278	1038	0	185	1357	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5			1		
Permitted Phases								2			6	
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
8: SH 35 & Magnoila Parkway

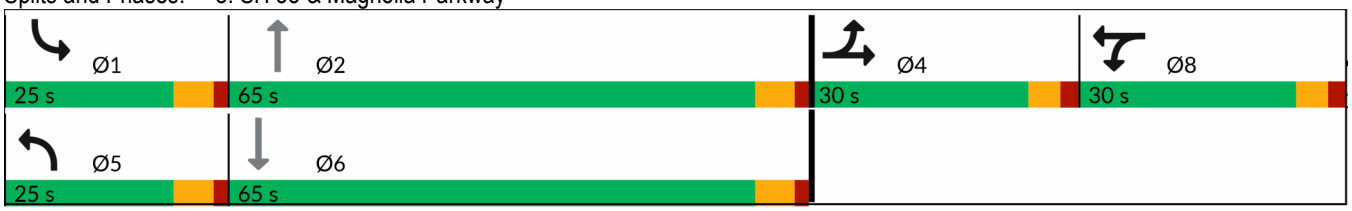
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	15.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		20.0	45.0		24.0	45.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	65.0		25.0	65.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		16.7%	43.3%		16.7%	43.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		Max	Max	
Act Effct Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.13	0.39		0.13	0.39	
v/c Ratio	0.99	1.51		0.69	1.87		1.24	0.75		0.83	1.00	
Control Delay (s/veh)	111.9	279.1		73.7	431.5		192.0	43.1		91.9	67.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	111.9	279.1		73.7	431.5		192.0	43.1		91.9	67.6	
LOS	F	F		E	F		F	D		F	E	
Approach Delay (s/veh)		237.9			378.2			74.6			70.5	
Approach LOS		F			F			E			E	
90th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
70th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
70th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
50th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
50th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
30th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
30th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	
10th %ile Green (s)	24.5	24.5		24.5	24.5		19.0	59.0		19.0	59.0	
10th %ile Term Code	Max	Max		Max	Max		Max	MaxR		MaxR	MaxR	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.87
Intersection Signal Delay (s/veh): 179.9 Intersection LOS: F
Intersection Capacity Utilization 116.4% ICU Level of Service H
Analysis Period (min) 15
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 150
50th %ile Actuated Cycle: 150
30th %ile Actuated Cycle: 150
10th %ile Actuated Cycle: 150

Splits and Phases: 8: SH 35 & Magnoila Parkway



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	21	3	31	0	71	0	1230	44	145	1316	1
Future Volume (vph)	37	21	3	31	0	71	0	1230	44	145	1316	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.906			0.995				
Flt Protected		0.969			0.985					0.950		
Satd. Flow (prot)	0	1805	1583	0	1662	0	1863	3522	0	1770	3539	0
Flt Permitted		0.969			0.985					0.161		
Satd. Flow (perm)	0	1805	1583	0	1662	0	1863	3522	0	300	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149		149			5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		688			655			2138			2138	
Travel Time (s)		15.6			14.9			48.6			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	40	23	3	34	0	77	0	1337	48	158	1430	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	3	0	111	0	0	1385	0	158	1431	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
9: SH 35/SH35 & High School

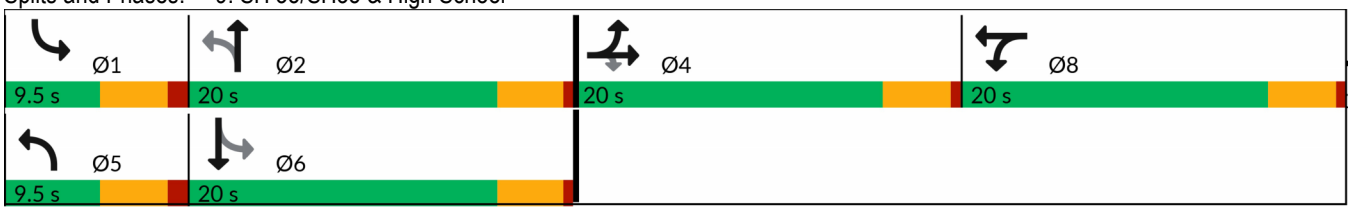
09/16/2024

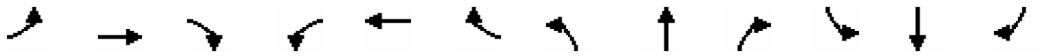
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	20.0	20.0	20.0	20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (%)	28.8%	28.8%	28.8%	28.8%	28.8%		13.7%	28.8%		13.7%	28.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	Max		None	None	
Act Effct Green (s)		7.2	7.2		6.0			21.5		27.2	28.8	
Actuated g/C Ratio		0.16	0.16		0.13			0.47		0.59	0.63	
v/c Ratio		0.22	0.01		0.32			0.84		0.46	0.65	
Control Delay (s/veh)		21.1	0.0		5.5			28.1		13.0	11.5	
Queue Delay		0.0	0.0		0.0			0.0		0.0	0.0	
Total Delay (s/veh)		21.1	0.0		5.5			28.1		13.0	11.5	
LOS		C	A		A			C		B	B	
Approach Delay (s/veh)		20.1			5.5			28.1			11.7	
Approach LOS		C			A			C			B	
90th %ile Green (s)	9.3	9.3	9.3	7.5	7.5		0.0	16.0		5.0	25.5	
90th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip	MaxR		Max	Hold	
70th %ile Green (s)	7.9	7.9	7.9	5.5	5.5		0.0	16.0		5.0	25.5	
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip	MaxR		Max	Hold	
50th %ile Green (s)	7.1	7.1	7.1	5.5	5.5		0.0	16.0		5.0	25.5	
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Skip	MaxR		Max	Hold	
30th %ile Green (s)	0.0	0.0	0.0	5.5	5.5		0.0	16.0		5.0	25.5	
30th %ile Term Code	Skip	Skip	Skip	Gap	Gap		Skip	MaxR		Max	Hold	
10th %ile Green (s)	0.0	0.0	0.0	0.0	0.0		0.0	31.0		0.0	31.0	
10th %ile Term Code	Skip	Skip	Skip	Skip	Skip		Skip	Dwell		Skip	Dwell	

Intersection Summary

Area Type: Other
Cycle Length: 69.5
Actuated Cycle Length: 45.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay (s/veh): 18.9 Intersection LOS: B
Intersection Capacity Utilization 66.6% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 54.3
70th %ile Actuated Cycle: 50.9
50th %ile Actuated Cycle: 50.1
30th %ile Actuated Cycle: 39
10th %ile Actuated Cycle: 35

Splits and Phases: 9: SH 35/SH35 & High School





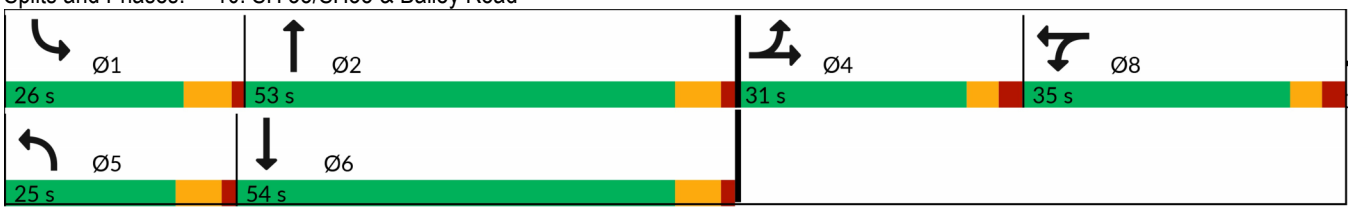
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	167	383	283	83	829	231	437	675	61	115	986	259
Future Volume (vph)	167	383	283	83	829	231	437	675	61	115	986	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	0.91	0.91	0.95	0.91	0.91	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.938			0.968			0.988			0.969	
Flt Protected	0.950	0.999		0.950			0.950			0.950		
Satd. Flow (prot)	1610	3177	0	1610	3282	0	1770	3497	0	1770	3430	0
Flt Permitted	0.950	0.999		0.950			0.950			0.950		
Satd. Flow (perm)	1610	3177	0	1610	3282	0	1770	3497	0	1770	3430	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		92			20			7			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		782			1597			6422			2138	
Travel Time (s)		17.8			36.3			146.0			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	182	416	308	90	901	251	475	734	66	125	1072	282
Shared Lane Traffic (%)	10%			10%								
Lane Group Flow (vph)	164	742	0	81	1161	0	475	800	0	125	1354	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		42			42			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

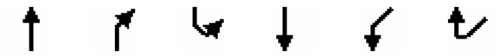
Lanes, Volumes, Timings
10: SH 35/SH35 & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		20.0	50.0		25.0	50.0	
Total Split (s)	31.0	31.0		35.0	35.0		25.0	53.0		26.0	54.0	
Total Split (%)	21.4%	21.4%		24.1%	24.1%		17.2%	36.6%		17.9%	37.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.5	6.5		6.5	6.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	25.0	25.0		29.0	29.0		18.5	50.8		15.2	47.5	
Actuated g/C Ratio	0.17	0.17		0.20	0.20		0.13	0.35		0.10	0.33	
v/c Ratio	0.59	1.19		0.25	1.73		2.11	0.65		0.68	1.19	
Control Delay (s/veh)	65.1	145.2		51.3	367.2		543.9	42.9		80.1	135.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	65.1	145.2		51.3	367.2		543.9	42.9		80.1	135.7	
LOS	E	F		D	F		F	D		F	F	
Approach Delay (s/veh)		130.7			346.6			229.5			131.0	
Approach LOS		F			F			F			F	
90th %ile Green (s)	25.0	25.0		29.0	29.0		18.5	46.5		19.5	47.5	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Max	
70th %ile Green (s)	25.0	25.0		29.0	29.0		18.5	48.2		17.8	47.5	
70th %ile Term Code	Max	Max		Max	Max		Max	Hold		Gap	Max	
50th %ile Green (s)	25.0	25.0		29.0	29.0		18.5	50.5		15.5	47.5	
50th %ile Term Code	Max	Max		Max	Max		Max	Hold		Gap	Max	
30th %ile Green (s)	25.0	25.0		29.0	29.0		18.5	52.8		13.2	47.5	
30th %ile Term Code	Max	Max		Max	Max		Max	Hold		Gap	Max	
10th %ile Green (s)	25.0	25.0		29.0	29.0		18.5	56.2		9.8	47.5	
10th %ile Term Code	Max	Max		Max	Max		Max	Hold		Gap	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 145			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.11			
Intersection Signal Delay (s/veh): 211.2		Intersection LOS: F	
Intersection Capacity Utilization 120.6%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 145			
70th %ile Actuated Cycle: 145			
50th %ile Actuated Cycle: 145			
30th %ile Actuated Cycle: 145			
10th %ile Actuated Cycle: 145			

Splits and Phases: 10: SH 35/SH35 & Bailey Road



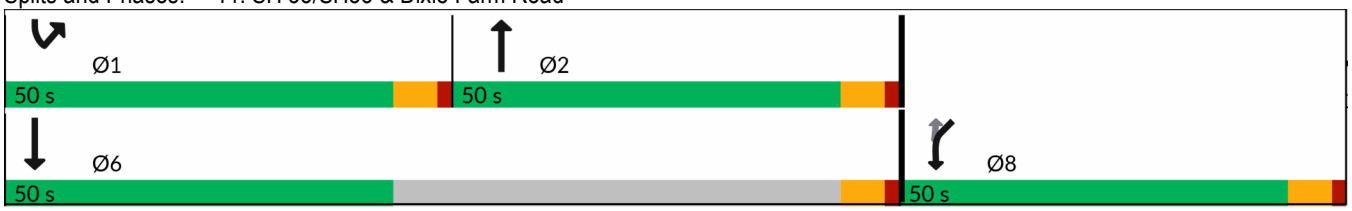


Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	770	699	345	1027	824	283
Future Volume (vph)	770	699	345	1027	824	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	320		180	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	1.00
Ped Bike Factor						
Frt	0.929					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3288	0	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3288	0	1770	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	154					248
Link Speed (mph)	30			30	30	
Link Distance (ft)	8103			6422	2765	
Travel Time (s)	184.2			146.0	62.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	837	760	375	1116	896	308
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1597	0	375	1116	896	308
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Minimum Initial (s)	15.0		5.0	15.0	5.0	5.0
Minimum Split (s)	45.0		30.0	45.0	30.0	30.0
Total Split (s)	50.0		50.0	50.0	50.0	50.0
Total Split (%)	33.3%		33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0
All-Red Time (s)	1.5		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5		6.5	6.5	6.5	6.5
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max		None	Max	None	None
Act Effct Green (s)	43.9		33.7	84.1	39.9	39.9
Actuated g/C Ratio	0.32		0.25	0.61	0.29	0.29
v/c Ratio	1.38		0.86	0.51	0.90	0.48
Control Delay (s/veh)	209.8		69.7	16.2	59.7	11.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	209.8		69.7	16.2	59.7	11.9
LOS	F		E	B	E	B
Approach Delay (s/veh)	209.8			29.7	47.4	
Approach LOS	F			C	D	
90th %ile Green (s)	43.5		43.5	93.5	43.5	43.5
90th %ile Term Code	MaxR		Max	Hold	Max	Max
70th %ile Green (s)	43.5		39.9	89.9	43.5	43.5
70th %ile Term Code	MaxR		Gap	Hold	Max	Max
50th %ile Green (s)	43.5		34.8	84.8	43.5	43.5
50th %ile Term Code	MaxR		Gap	Hold	Max	Max
30th %ile Green (s)	43.5		29.8	79.8	38.7	38.7
30th %ile Term Code	MaxR		Gap	Hold	Gap	Gap
10th %ile Green (s)	43.5		22.4	72.4	30.8	30.8
10th %ile Term Code	MaxR		Gap	Hold	Gap	Gap

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 137.1			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.38			
Intersection Signal Delay (s/veh): 101.7		Intersection LOS: F	
Intersection Capacity Utilization 102.6%		ICU Level of Service G	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 150			
70th %ile Actuated Cycle: 146.4			
50th %ile Actuated Cycle: 141.3			
30th %ile Actuated Cycle: 131.5			
10th %ile Actuated Cycle: 116.2			

Splits and Phases: 11: SH 35/SH35 & Dixie Farm Road



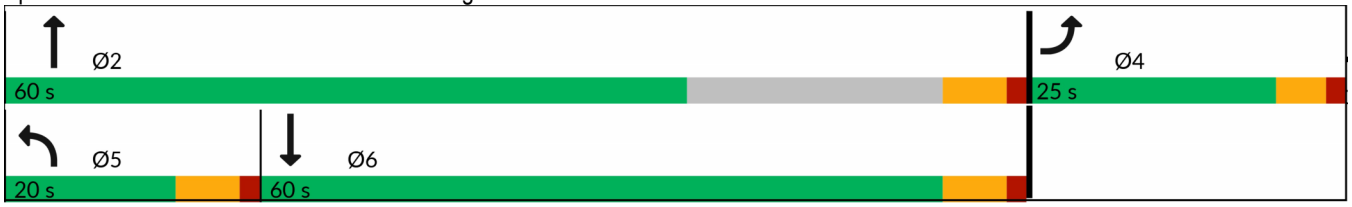


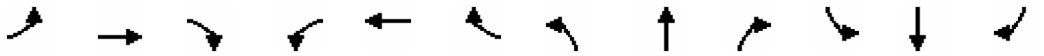
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	67	144	246	1348	1717	129
Future Volume (vph)	67	144	246	1348	1717	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	180			0
Storage Lanes	1	0	1			0
Taper Length (ft)	0		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.908				0.990	
Flt Protected	0.984		0.950			
Satd. Flow (prot)	1664	0	1770	3539	3504	0
Flt Permitted	0.984		0.950			
Satd. Flow (perm)	1664	0	1770	3539	3504	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	91				11	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1279			693	8103	
Travel Time (s)	29.1			15.8	184.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	73	157	267	1465	1866	140
Shared Lane Traffic (%)						
Lane Group Flow (vph)	230	0	267	1465	2006	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (ft)	20		20	100	100	
Trailing Detector (ft)	0		0	0	0	
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Detector Phase	4		5	2	6	
Switch Phase						

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Initial (s)	5.0		5.0	20.0	20.0	
Minimum Split (s)	25.0		20.0	60.0	60.0	
Total Split (s)	25.0		20.0	60.0	60.0	
Total Split (%)	23.8%		19.0%	57.1%	57.1%	
Yellow Time (s)	4.0		5.0	5.0	5.0	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.5		6.5	6.5	6.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Max	None	
Act Effct Green (s)	13.5		13.5	73.6	53.6	
Actuated g/C Ratio	0.14		0.14	0.74	0.54	
v/c Ratio	0.75		1.11	0.56	1.06	
Control Delay (s/veh)	40.3		132.0	7.2	61.8	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	40.3		132.0	7.2	61.8	
LOS	D		F	A	E	
Approach Delay (s/veh)	40.3			26.4	61.8	
Approach LOS	D			C	E	
90th %ile Green (s)	19.5		13.5	73.5	53.5	
90th %ile Term Code	Max		Max	Hold	Max	
70th %ile Green (s)	17.3		13.5	73.5	53.5	
70th %ile Term Code	Gap		Max	Hold	Max	
50th %ile Green (s)	14.0		13.5	73.5	53.5	
50th %ile Term Code	Gap		Max	Hold	Max	
30th %ile Green (s)	10.9		13.5	73.5	53.5	
30th %ile Term Code	Gap		Max	Hold	Max	
10th %ile Green (s)	6.9		13.5	73.5	53.5	
10th %ile Term Code	Gap		Max	Hold	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 99.2			
Natural Cycle: 125			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay (s/veh): 45.1		Intersection LOS: D	
Intersection Capacity Utilization 93.2%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 105			
70th %ile Actuated Cycle: 102.8			
50th %ile Actuated Cycle: 99.5			
30th %ile Actuated Cycle: 96.4			
10th %ile Actuated Cycle: 92.4			

Splits and Phases: 12: SH 35/SH35 & Hastings Canon Road





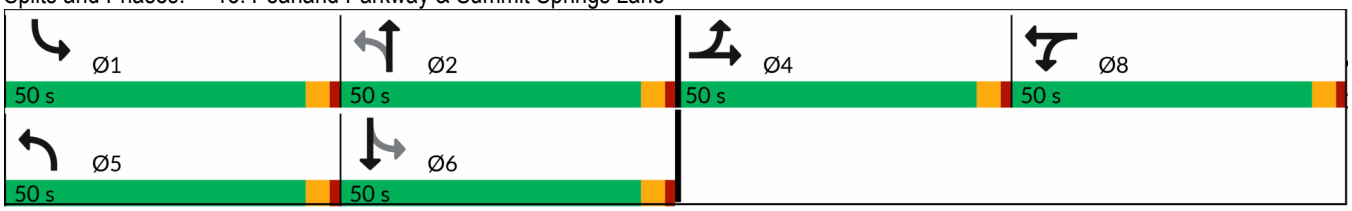
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	3	40	12	1	9	207	1184	13	19	2004	78
Future Volume (vph)	70	3	40	12	1	9	207	1184	13	19	2004	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	180		150	180		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.860			0.864			0.998			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1602	0	1770	1609	0	1770	3532	0	1770	3518	0
Flt Permitted	0.950			0.950			0.074			0.195		
Satd. Flow (perm)	1770	1602	0	1770	1609	0	138	3532	0	363	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			10						2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1005			878			1367			830	
Travel Time (s)		22.8			20.0			31.1			18.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	76	3	43	13	1	10	225	1287	14	21	2178	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	46	0	13	11	0	225	1301	0	21	2263	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		0	2		0	0		1	0	
Detector Template	Left	Thru		Thru	Thru		Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100		0	100		0	0		20	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
13: Pearland Parkway & Summit Springs Lane 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		15.0	45.0		15.0	45.0	
Total Split (s)	50.0	50.0		50.0	50.0		50.0	50.0		50.0	50.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	25.0%		25.0%	25.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	10.1	10.1		8.1	8.1		65.7	61.8		51.8	45.8	
Actuated g/C Ratio	0.11	0.11		0.09	0.09		0.73	0.68		0.57	0.51	
v/c Ratio	0.39	0.21		0.08	0.07		0.61	0.54		0.07	1.27	
Control Delay (s/veh)	46.4	16.8		45.4	26.2		25.9	11.0		7.5	149.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	46.4	16.8		45.4	26.2		25.9	11.0		7.5	149.7	
LOS	D	B		D	C		C	B		A	F	
Approach Delay (s/veh)		35.2			36.6			13.2			148.4	
Approach LOS		D			D			B			F	
90th %ile Green (s)	13.6	13.6		8.0	8.0		22.1	60.6		6.5	45.0	
90th %ile Term Code	Gap	Gap		Min	Min		Gap	Hold		Gap	Max	
70th %ile Green (s)	11.3	11.3		8.0	8.0		17.4	56.3		6.1	45.0	
70th %ile Term Code	Gap	Gap		Min	Min		Gap	Hold		Gap	Max	
50th %ile Green (s)	9.9	9.9		0.0	0.0		15.7	65.7		0.0	45.0	
50th %ile Term Code	Gap	Gap		Skip	Skip		Gap	Hold		Skip	Max	
30th %ile Green (s)	8.2	8.2		0.0	0.0		11.5	61.5		0.0	45.0	
30th %ile Term Code	Gap	Gap		Skip	Skip		Gap	Hold		Skip	Max	
10th %ile Green (s)	8.0	8.0		0.0	0.0		8.8	58.8		0.0	45.0	
10th %ile Term Code	Min	Min		Skip	Skip		Gap	Hold		Skip	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 200			
Actuated Cycle Length: 90.5			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay (s/veh): 92.1		Intersection LOS: F	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 108.7			
70th %ile Actuated Cycle: 101.7			
50th %ile Actuated Cycle: 85.6			
30th %ile Actuated Cycle: 79.7			
10th %ile Actuated Cycle: 76.8			

Splits and Phases: 13: Pearland Parkway & Summit Springs Lane



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	343	1335	258	40	962	451	201	333	38	397	332	263
Future Volume (vph)	343	1335	258	40	962	451	201	333	38	397	332	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		120	120		120	120		120	120		120
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.95	0.91	0.91	0.95
Ped Bike Factor												
Frt			0.850		0.952			0.986			0.940	
Flt Protected	0.950			0.950			0.950	0.997		0.950	0.995	
Satd. Flow (prot)	1770	3539	1583	1770	3369	0	1610	3333	0	1610	3171	0
Flt Permitted	0.950			0.950			0.950	0.997		0.950	0.995	
Satd. Flow (perm)	1770	3539	1583	1770	3369	0	1610	3333	0	1610	3171	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135		60			6			81	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		810			670			666			826	
Travel Time (s)		18.4			15.2			15.1			18.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	373	1451	280	43	1046	490	218	362	41	432	361	286
Shared Lane Traffic (%)							10%			15%		
Lane Group Flow (vph)	373	1451	280	43	1536	0	196	425	0	367	712	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0	0	0	0		0	2		0	2	
Detector Template	Thru	Thru	Thru	Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	0	0	0	0		0	100		0	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4									
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings

14: Barry Rose Road/Hughes Road & Pearland Parkway

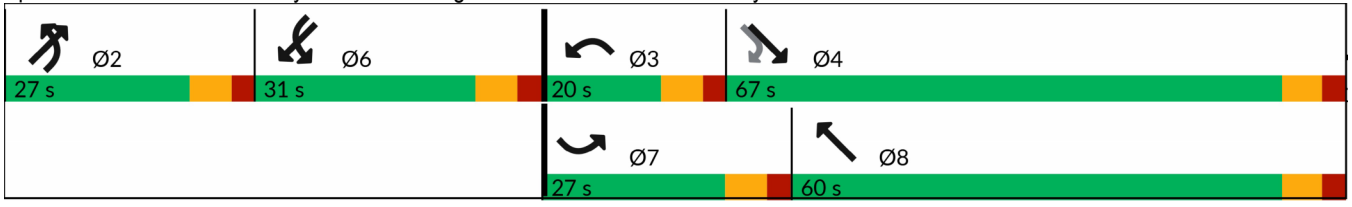
09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.0	55.0	55.0	20.0	55.0		25.0	25.0		25.0	25.0	
Total Split (s)	27.0	67.0	67.0	20.0	60.0		27.0	27.0		31.0	31.0	
Total Split (%)	18.6%	46.2%	46.2%	13.8%	41.4%		18.6%	18.6%		21.4%	21.4%	
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	None	None	None	None		Max	Max		None	None	
Act Effct Green (s)	20.0	66.6	66.6	8.9	53.0		20.0	20.0		24.0	24.0	
Actuated g/C Ratio	0.14	0.46	0.46	0.06	0.37		0.14	0.14		0.17	0.17	
v/c Ratio	1.53	0.89	0.35	0.40	1.21		0.88	0.92		1.38	1.20	
Control Delay (s/veh)	297.9	45.0	14.9	75.2	140.7		97.3	85.8		236.3	151.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	297.9	45.0	14.9	75.2	140.7		97.3	85.8		236.3	151.0	
LOS	F	D	B	E	F		F	F		F	F	
Approach Delay (s/veh)		85.8			139.0			89.4			180.0	
Approach LOS		F			F			F			F	
90th %ile Green (s)	20.0	60.7	60.7	12.3	53.0		20.0	20.0		24.0	24.0	
90th %ile Term Code	Max	Hold	Hold	Gap	Max		MaxR	MaxR		Max	Max	
70th %ile Green (s)	20.0	62.7	62.7	10.3	53.0		20.0	20.0		24.0	24.0	
70th %ile Term Code	Max	Hold	Hold	Gap	Max		MaxR	MaxR		Max	Max	
50th %ile Green (s)	20.0	64.1	64.1	8.9	53.0		20.0	20.0		24.0	24.0	
50th %ile Term Code	Max	Hold	Hold	Gap	Max		MaxR	MaxR		Max	Max	
30th %ile Green (s)	20.0	65.5	65.5	7.5	53.0		20.0	20.0		24.0	24.0	
30th %ile Term Code	Max	Hold	Hold	Gap	Max		MaxR	MaxR		Max	Max	
10th %ile Green (s)	20.0	80.0	80.0	0.0	53.0		20.0	20.0		24.0	24.0	
10th %ile Term Code	Max	Hold	Hold	Skip	Max		MaxR	MaxR		Max	Max	

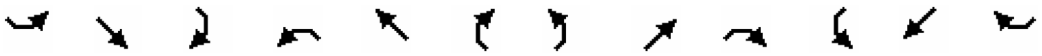
Intersection Summary

Area Type:	Other
Cycle Length: 145	
Actuated Cycle Length: 145	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.53	
Intersection Signal Delay (s/veh): 120.7	Intersection LOS: F
Intersection Capacity Utilization 113.6%	ICU Level of Service H
Analysis Period (min) 15	
90th %ile Actuated Cycle: 145	
70th %ile Actuated Cycle: 145	
50th %ile Actuated Cycle: 145	
30th %ile Actuated Cycle: 145	
10th %ile Actuated Cycle: 145	

Splits and Phases: 14: Barry Rose Road/Hughes Road & Pearland Parkway



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	262	7	22	38	1	22	34	1206	10	56	1486	201
Future Volume (vph)	262	7	22	38	1	22	34	1206	10	56	1486	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	200		150	120		150
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.989			0.945			0.999			0.982	
Flt Protected		0.957			0.970		0.950			0.950		
Satd. Flow (prot)	0	3350	0	0	3244	0	1770	3536	0	1770	3476	0
Flt Permitted		0.957			0.970		0.135			0.130		
Satd. Flow (perm)	0	3350	0	0	3244	0	251	3536	0	242	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			24			1			20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		299			285			1148			332	
Travel Time (s)		6.8			6.5			26.1			7.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	285	8	24	41	1	24	37	1311	11	61	1615	218
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	317	0	0	66	0	37	1322	0	61	1833	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		0	0		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	20	0		20	0		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												

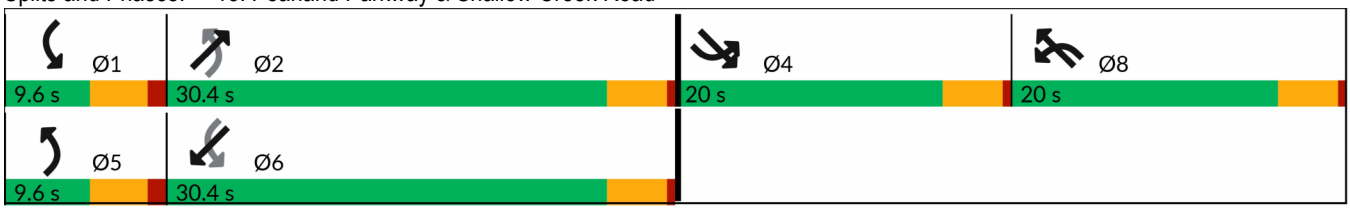


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		9.6	30.4		9.6	30.4	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		12.0%	38.0%		12.0%	38.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.5	4.0		4.5	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)		10.8			6.5		31.1	29.0		31.9	30.7	
Actuated g/C Ratio		0.18			0.11		0.53	0.49		0.54	0.52	
v/c Ratio		0.86dl			0.17		0.14	0.76		0.23	1.01	
Control Delay (s/veh)		25.4			20.9		9.4	20.9		10.3	43.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		25.4			20.9		9.4	20.9		10.3	43.2	
LOS		C			C		A	C		B	D	
Approach Delay (s/veh)		25.4			20.9			20.6			42.2	
Approach LOS		C			C			C			D	
90th %ile Green (s)	14.8	14.8		7.8	7.8		5.1	26.4		5.1	26.4	
90th %ile Term Code	Gap	Gap		Gap	Gap		Max	MaxR		Max	Max	
70th %ile Green (s)	12.6	12.6		6.9	6.9		5.1	26.4		5.1	26.4	
70th %ile Term Code	Gap	Gap		Gap	Gap		Max	MaxR		Max	Max	
50th %ile Green (s)	11.2	11.2		6.3	6.3		0.0	26.4		5.1	36.0	
50th %ile Term Code	Gap	Gap		Gap	Gap		Skip	MaxR		Max	Hold	
30th %ile Green (s)	8.4	8.4		0.0	0.0		0.0	26.4		0.0	26.4	
30th %ile Term Code	Gap	Gap		Skip	Skip		Skip	MaxR		Skip	Max	
10th %ile Green (s)	7.5	7.5		0.0	0.0		0.0	32.5		0.0	32.5	
10th %ile Term Code	Gap	Gap		Skip	Skip		Skip	Dwell		Skip	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 58.9			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay (s/veh): 32.2		Intersection LOS: C	
Intersection Capacity Utilization 75.3%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 70.6			
70th %ile Actuated Cycle: 67.5			
50th %ile Actuated Cycle: 65.5			
30th %ile Actuated Cycle: 42.8			
10th %ile Actuated Cycle: 48			

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 15: Pearland Parkway & Shallow Creek Road



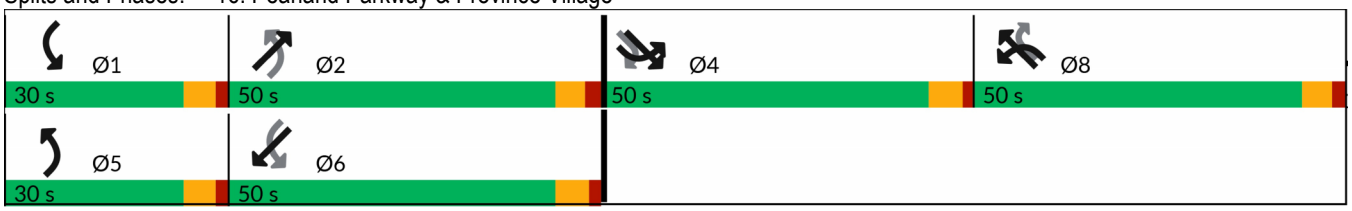
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	244	27	147	77	21	147	241	925	49	110	1374	70
Future Volume (vph)	244	27	147	77	21	147	241	925	49	110	1374	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		150	200		150	120		150
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	0			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.992			0.993	
Flt Protected		0.957			0.962		0.950			0.950		
Satd. Flow (prot)	0	1783	1583	0	1792	1583	1770	3511	0	1770	3514	0
Flt Permitted		0.957			0.962		0.080			0.090		
Satd. Flow (perm)	0	1783	1583	0	1792	1583	149	3511	0	168	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			158			160		3			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		737			805			403			1148	
Travel Time (s)		16.8			18.3			9.2			26.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	265	29	160	84	23	160	262	1005	53	120	1493	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	294	160	0	107	160	262	1058	0	120	1569	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			0			48			48	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	0	0	2	1	0	0		1	0	
Detector Template	Left	Thru	Thru	Thru	Thru	Right	Thru	Thru		Left	Thru	
Leading Detector (ft)	20	100	0	50	100	20	0	0		20	0	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
16: Pearland Parkway & Province Village 09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.0		3.0	5.0	
Minimum Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	25.0	35.0		25.0	35.0	
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	30.0	50.0		30.0	50.0	
Total Split (%)	27.8%	27.8%	27.8%	27.8%	27.8%	27.8%	16.7%	27.8%		16.7%	27.8%	
Yellow Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.5	4.0		4.5	4.5	
All-Red Time (s)	1.5	1.5	1.5	2.0	2.0	2.0	1.5	2.0		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	Max	Max	Max	None	Max		None	None	
Act Effct Green (s)		32.9	32.9		44.1	44.1	73.2	54.4		57.2	44.1	
Actuated g/C Ratio		0.20	0.20		0.26	0.26	0.43	0.32		0.34	0.26	
v/c Ratio		0.85	0.37		0.23	0.30	0.91	0.93		0.66	1.70	
Control Delay (s/veh)		87.0	9.8		52.3	8.3	82.6	69.4		55.2	356.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		87.0	9.8		52.3	8.3	82.6	69.4		55.2	356.6	
LOS		F	A		D	A	F	E		E	F	
Approach Delay (s/veh)		59.8			25.9			72.1			335.2	
Approach LOS		E			C			E			F	
90th %ile Green (s)	44.0	44.0	44.0	44.0	44.0	44.0	24.0	48.4		19.6	44.0	
90th %ile Term Code	Max	Max	Max	MaxR	MaxR	MaxR	Max	Hold		Gap	Max	
70th %ile Green (s)	38.4	38.4	38.4	44.0	44.0	44.0	24.0	52.6		15.4	44.0	
70th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR	MaxR	Max	Hold		Gap	Max	
50th %ile Green (s)	32.8	32.8	32.8	44.0	44.0	44.0	24.0	55.6		12.4	44.0	
50th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR	MaxR	Max	Hold		Gap	Max	
30th %ile Green (s)	28.5	28.5	28.5	44.0	44.0	44.0	24.0	57.5		10.5	44.0	
30th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR	MaxR	Max	Hold		Gap	Max	
10th %ile Green (s)	22.3	22.3	22.3	44.0	44.0	44.0	20.7	56.4		8.3	44.0	
10th %ile Term Code	Gap	Gap	Gap	MaxR	MaxR	MaxR	Gap	Hold		Gap	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 180			
Actuated Cycle Length: 168.5			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.70			
Intersection Signal Delay (s/veh): 186.4		Intersection LOS: F	
Intersection Capacity Utilization 90.2%		ICU Level of Service E	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 180			
70th %ile Actuated Cycle: 174.4			
50th %ile Actuated Cycle: 168.8			
30th %ile Actuated Cycle: 164.5			
10th %ile Actuated Cycle: 155			

Splits and Phases: 16: Pearland Parkway & Province Village



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Future Volume (vph)	135	1082	142	187	1264	447	195	582	148	376	434	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		150	150		150	120		150	450		150
Storage Lanes	1		0	1		0	1		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.95	0.95
Ped Bike Factor												
Frt		0.983			0.961			0.970			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3401	0	1770	3433	0	3433	3433	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3479	0	1770	3401	0	1770	3433	0	3433	3433	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			32			16			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1215			1637			473			570	
Travel Time (s)		27.6			37.2			10.8			13.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	147	1176	154	203	1374	486	212	633	161	409	472	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	1330	0	203	1860	0	212	794	0	409	592	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		0	2		0	0		0	0	
Detector Template	Thru	Thru		Thru	Thru		Thru	Thru		Thru	Thru	
Leading Detector (ft)	0	100		0	100		0	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases												
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												

Lanes, Volumes, Timings
17: Pearland Parkway & FM 518

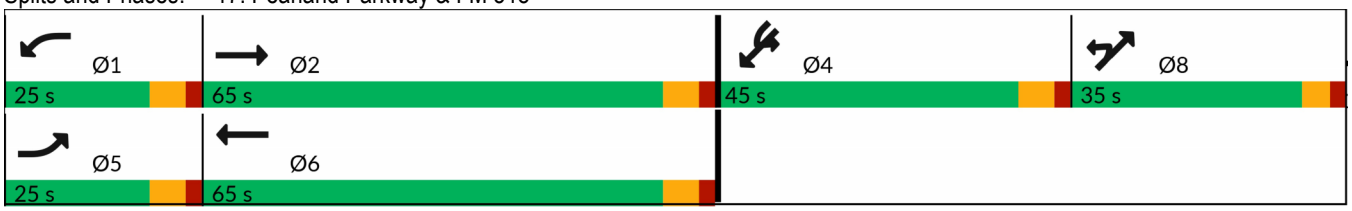
09/16/2024

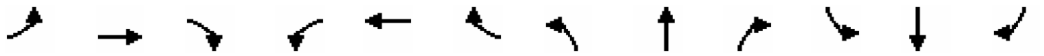
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	3.0	10.0		3.0	10.0		5.0	5.0		7.0	7.0	
Minimum Split (s)	20.0	45.0		20.0	45.0		25.0	25.0		25.0	25.0	
Total Split (s)	25.0	65.0		25.0	65.0		35.0	35.0		45.0	45.0	
Total Split (%)	14.7%	38.2%		14.7%	38.2%		20.6%	20.6%		26.5%	26.5%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		5.5	5.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)	16.9	58.5		18.5	60.1		29.5	29.5		32.7	32.7	
Actuated g/C Ratio	0.10	0.36		0.11	0.37		0.18	0.18		0.20	0.20	
v/c Ratio	0.81	1.07		1.02	1.47		0.67	1.26		0.60	0.85	
Control Delay (s/veh)	103.1	95.1		138.4	252.6		75.0	181.1		63.6	73.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	103.1	95.1		138.4	252.6		75.0	181.1		63.6	73.9	
LOS	F	F		F	F		E	F		E	E	
Approach Delay (s/veh)		95.9			241.3			158.8			69.7	
Approach LOS		F			F			F			E	
90th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		38.5	38.5	
90th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Max	Max	
70th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		37.0	37.0	
70th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Gap	Gap	
50th %ile Green (s)	18.5	58.5		18.5	58.5		29.5	29.5		33.6	33.6	
50th %ile Term Code	Max	Max		Max	Max		MaxR	MaxR		Gap	Gap	
30th %ile Green (s)	16.7	58.5		18.5	60.3		29.5	29.5		30.3	30.3	
30th %ile Term Code	Gap	Max		Max	Hold		MaxR	MaxR		Gap	Gap	
10th %ile Green (s)	12.6	58.5		18.5	64.4		29.5	29.5		24.8	24.8	
10th %ile Term Code	Gap	Max		Max	Hold		MaxR	MaxR		Gap	Gap	

Intersection Summary

Area Type:	Other		
Cycle Length: 170			
Actuated Cycle Length: 164.3			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.47			
Intersection Signal Delay (s/veh): 156.6		Intersection LOS: F	
Intersection Capacity Utilization 109.1%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 170			
70th %ile Actuated Cycle: 168.5			
50th %ile Actuated Cycle: 165.1			
30th %ile Actuated Cycle: 161.8			
10th %ile Actuated Cycle: 156.3			

Splits and Phases: 17: Pearland Parkway & FM 518





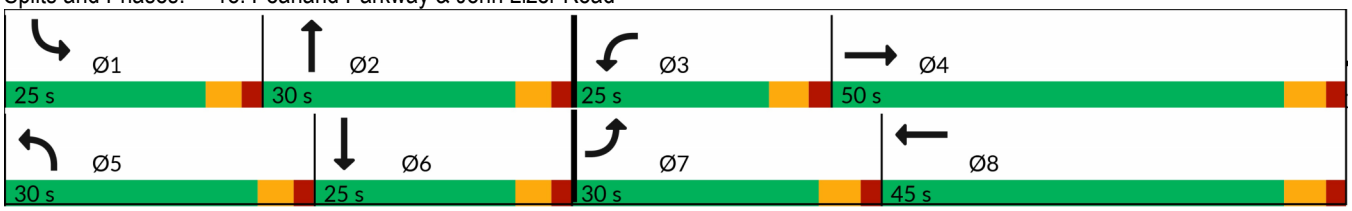
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	339	247	124	115	357	30	195	613	130	33	728	457
Future Volume (vph)	339	247	124	115	357	30	195	613	130	33	728	457
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		100	100		100	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.950			0.988			0.974			0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1770	0	1770	1840	0	1770	3447	0	1770	3334	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1770	0	1770	1840	0	1770	3447	0	1770	3334	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			3			17			89	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1007			1264			3595			815	
Travel Time (s)		22.9			28.7			81.7			18.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	368	268	135	125	388	33	212	666	141	36	791	497
Shared Lane Traffic (%)												
Lane Group Flow (vph)	368	403	0	125	421	0	212	807	0	36	1288	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			72			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2		1	2		1	0		0	0	
Detector Template	Thru	Thru		Left	Thru		Left	Thru		Thru	Thru	
Leading Detector (ft)	0	100		20	100		20	0		0	0	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
18: Pearland Parkway & John Lizer Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	45.0		25.0	45.0		30.0	30.0		25.0	25.0	
Total Split (s)	30.0	50.0		25.0	45.0		30.0	30.0		25.0	25.0	
Total Split (%)	23.1%	38.5%		19.2%	34.6%		23.1%	23.1%		19.2%	19.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		Max	Max		None	None	
Act Effct Green (s)	24.1	42.4		13.8	32.1		24.6	41.1		8.0	19.6	
Actuated g/C Ratio	0.20	0.34		0.11	0.26		0.20	0.33		0.06	0.16	
v/c Ratio	1.07	0.65		0.63	0.88		0.60	0.70		0.32	2.14	
Control Delay (s/veh)	115.2	38.5		67.2	62.9		54.4	41.4		63.7	542.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	115.2	38.5		67.2	62.9		54.4	41.4		63.7	542.0	
LOS	F	D		E	E		D	D		E	F	
Approach Delay (s/veh)		75.1			63.9			44.1			529.0	
Approach LOS		E			E			D			F	
90th %ile Green (s)	24.0	44.0		19.0	39.0		24.5	33.1		10.9	19.5	
90th %ile Term Code	Max	Hold		Max	Max		MaxR	Hold		Gap	Max	
70th %ile Green (s)	24.0	46.3		16.7	39.0		24.5	34.7		9.3	19.5	
70th %ile Term Code	Max	Hold		Gap	Max		MaxR	Hold		Gap	Max	
50th %ile Green (s)	24.0	43.1		14.0	33.1		24.5	36.1		7.9	19.5	
50th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Gap	Max	
30th %ile Green (s)	24.0	40.8		11.6	28.4		24.5	49.5		0.0	19.5	
30th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Skip	Max	
10th %ile Green (s)	24.0	37.8		8.6	22.4		24.5	49.5		0.0	19.5	
10th %ile Term Code	Max	Hold		Gap	Gap		MaxR	Hold		Skip	Max	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 123.4			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.14			
Intersection Signal Delay (s/veh): 229.0		Intersection LOS: F	
Intersection Capacity Utilization 104.1%		ICU Level of Service G	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 130			
70th %ile Actuated Cycle: 130			
50th %ile Actuated Cycle: 124.1			
30th %ile Actuated Cycle: 119.4			
10th %ile Actuated Cycle: 113.4			

Splits and Phases: 18: Pearland Parkway & John Lizer Road



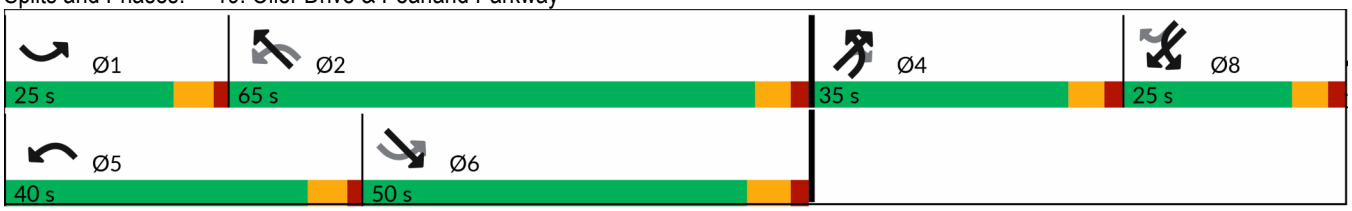
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	157	611	411	453	382	61	380	47	367	43	33	90
Future Volume (vph)	157	611	411	453	382	61	380	47	367	43	33	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	280		0	0		0
Storage Lanes	1		0	1		0	1		1	0		1
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.940			0.979				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.962			0.972	
Satd. Flow (prot)	1770	3327	0	1770	3465	0	1681	1702	1583	0	1811	1583
Flt Permitted	0.477			0.080			0.950	0.962			0.972	
Satd. Flow (perm)	889	3327	0	149	3465	0	1681	1702	1583	0	1811	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		109			14				399			160
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3595			633			729			931	
Travel Time (s)		81.7			14.4			16.6			21.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	171	664	447	492	415	66	413	51	399	47	36	98
Shared Lane Traffic (%)							44%					
Lane Group Flow (vph)	171	1111	0	492	481	0	231	233	399	0	83	98
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		62			62			60			72	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		8	8	
Permitted Phases	6			2					4			8
Detector Phase	1	6		5	2		4	4	4	8	8	8
Switch Phase												

Lanes, Volumes, Timings
19: Oiler Drive & Pearland Parkway 09/16/2024

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)	5.0	15.0		5.0	20.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	35.0		25.0	35.0		35.0	35.0	35.0	25.0	25.0	25.0
Total Split (s)	25.0	50.0		40.0	65.0		35.0	35.0	35.0	25.0	25.0	25.0
Total Split (%)	16.7%	33.3%		26.7%	43.3%		23.3%	23.3%	23.3%	16.7%	16.7%	16.7%
Yellow Time (s)	4.5	5.0		4.5	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	2.0		1.5	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	7.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Max		None	None		None	None	None	None	None	None
Act Effct Green (s)	55.7	43.1		84.3	66.6		24.5	24.5	24.5		11.7	11.7
Actuated g/C Ratio	0.40	0.31		0.61	0.48		0.18	0.18	0.18		0.08	0.08
v/c Ratio	0.40	1.00		1.01	0.29		0.78	0.77	0.66		0.55	0.35
Control Delay (s/veh)	19.2	70.1		83.6	23.2		73.0	72.5	10.1		75.3	3.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	19.2	70.1		83.6	23.2		73.0	72.5	10.1		75.3	3.6
LOS	B	E		F	C		E	E	B		E	A
Approach Delay (s/veh)		63.3			53.7			43.8			36.5	
Approach LOS		E			D			D			D	
90th %ile Green (s)	16.1	43.0		34.0	61.9		29.0	29.0	29.0	16.6	16.6	16.6
90th %ile Term Code	Gap	MaxR		Max	Hold		Max	Max	Max	Gap	Gap	Gap
70th %ile Green (s)	13.4	43.0		34.0	64.6		29.0	29.0	29.0	13.7	13.7	13.7
70th %ile Term Code	Gap	MaxR		Max	Hold		Max	Max	Max	Gap	Gap	Gap
50th %ile Green (s)	11.7	43.0		34.0	66.3		27.0	27.0	27.0	11.8	11.8	11.8
50th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Gap	Gap	Gap
30th %ile Green (s)	9.8	43.0		34.0	68.2		22.3	22.3	22.3	9.8	9.8	9.8
30th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Gap	Gap	Gap
10th %ile Green (s)	7.7	43.0		34.0	70.3		16.3	16.3	16.3	7.2	7.2	7.2
10th %ile Term Code	Gap	MaxR		Max	Hold		Gap	Gap	Gap	Gap	Gap	Gap

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 138.5	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay (s/veh): 53.9	Intersection LOS: D
Intersection Capacity Utilization 89.4%	ICU Level of Service E
Analysis Period (min) 15	
90th %ile Actuated Cycle: 147.6	
70th %ile Actuated Cycle: 144.7	
50th %ile Actuated Cycle: 140.8	
30th %ile Actuated Cycle: 134.1	
10th %ile Actuated Cycle: 125.5	

Splits and Phases: 19: Oiler Drive & Pearland Parkway



Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	628	176	96	962	955	753
Future Volume (vph)	628	176	96	962	955	753
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	250			150
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor						
Frt		0.850			0.934	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3306	0
Flt Permitted	0.950		0.117			
Satd. Flow (perm)	3433	1583	218	3539	3306	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		191			216	
Link Speed (mph)	30			30	30	
Link Distance (ft)	884			1122	1114	
Travel Time (s)	20.1			25.5	25.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	683	191	104	1046	1038	818
Shared Lane Traffic (%)						
Lane Group Flow (vph)	683	191	104	1046	1856	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	54			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	6		7	4	8	
Permitted Phases		6	4			
Detector Phase	6	6	7	4	8	
Switch Phase						

Lanes, Volumes, Timings
20: Dixie Farm Road & Pearland Parkway

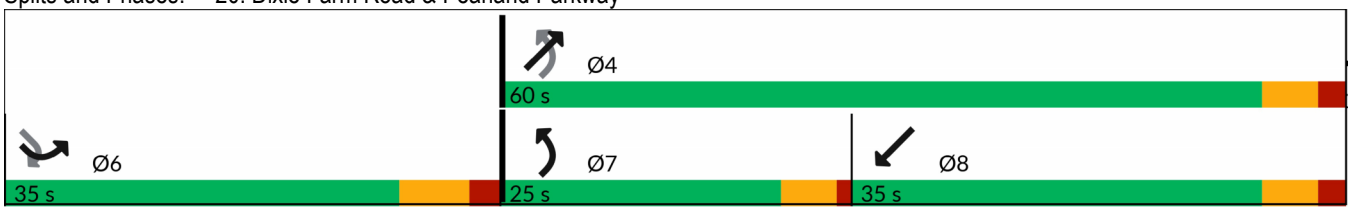
09/16/2024

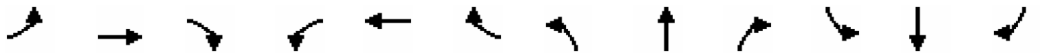
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Minimum Initial (s)	20.0	20.0	5.0	15.0	5.0	
Minimum Split (s)	35.0	35.0	25.0	35.0	35.0	
Total Split (s)	35.0	35.0	25.0	60.0	35.0	
Total Split (%)	36.8%	36.8%	26.3%	63.2%	36.8%	
Yellow Time (s)	5.0	5.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Max	Max	None	None	None	
Act Effct Green (s)	28.2	28.2	41.2	40.2	29.2	
Actuated g/C Ratio	0.35	0.35	0.51	0.49	0.36	
v/c Ratio	0.58	0.28	0.38	0.60	1.40	
Control Delay (s/veh)	25.0	4.6	14.3	16.3	209.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	25.0	4.6	14.3	16.3	209.4	
LOS	C	A	B	B	F	
Approach Delay (s/veh)	20.5			16.1	209.4	
Approach LOS	C			B	F	
90th %ile Green (s)	28.0	28.0	10.7	44.7	29.0	
90th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
70th %ile Green (s)	28.0	28.0	9.7	43.7	29.0	
70th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
50th %ile Green (s)	28.0	28.0	8.8	42.8	29.0	
50th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
30th %ile Green (s)	28.0	28.0	7.8	41.8	29.0	
30th %ile Term Code	MaxR	MaxR	Gap	Hold	Max	
10th %ile Green (s)	28.0	28.0	0.0	29.0	29.0	
10th %ile Term Code	MaxR	MaxR	Skip	Hold	Max	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 81.4
Natural Cycle: 135
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.40
Intersection Signal Delay (s/veh): 109.6 Intersection LOS: F
Intersection Capacity Utilization 88.8% ICU Level of Service E
Analysis Period (min) 15
90th %ile Actuated Cycle: 85.7
70th %ile Actuated Cycle: 84.7
50th %ile Actuated Cycle: 83.8
30th %ile Actuated Cycle: 82.8
10th %ile Actuated Cycle: 70

Splits and Phases: 20: Dixie Farm Road & Pearland Parkway





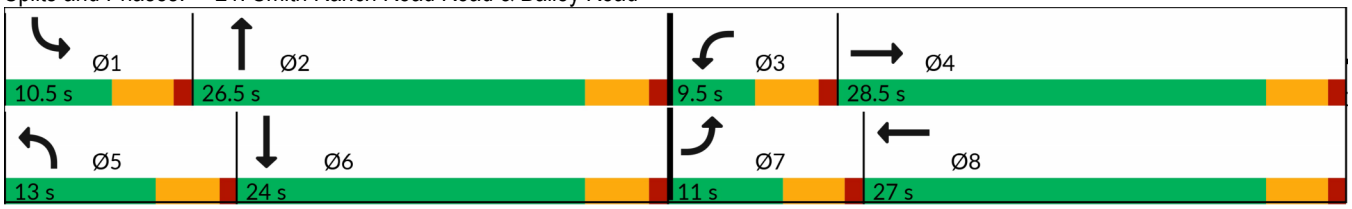
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	835	98	19	918	98	67	25	19	176	65	170
Future Volume (vph)	136	835	98	19	918	98	67	25	19	176	65	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	100		0	100		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.984			0.985			0.934			0.892	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3483	0	1770	3486	0	1770	3306	0	1770	3157	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3483	0	1770	3486	0	1770	3306	0	1770	3157	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			15			21			185	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		930			5111			1029			1098	
Travel Time (s)		21.1			116.2			23.4			25.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	148	908	107	21	998	107	73	27	21	191	71	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	1015	0	21	1105	0	73	48	0	191	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

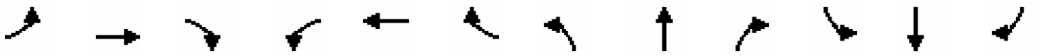
Lanes, Volumes, Timings
21: Smith Ranch Road Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	11.0	28.5		9.5	27.0		13.0	26.5		10.5	24.0	
Total Split (%)	14.7%	38.0%		12.7%	36.0%		17.3%	35.3%		14.0%	32.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	6.5	29.7		5.0	22.5		7.6	22.0		6.0	22.4	
Actuated g/C Ratio	0.09	0.40		0.07	0.30		0.10	0.29		0.08	0.30	
v/c Ratio	0.97	0.73		0.18	1.05		0.41	0.05		1.35	0.24	
Control Delay (s/veh)	103.5	24.5		36.8	68.2		38.3	12.9		230.5	7.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	103.5	24.5		36.8	68.2		38.3	12.9		230.5	7.7	
LOS	F	C		D	E		D	B		F	A	
Approach Delay (s/veh)		34.5			67.6			28.2			102.9	
Approach LOS		C			E			C			F	
90th %ile Green (s)	6.5	24.0		5.0	22.5		8.5	22.0		6.0	19.5	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	6.5	24.0		5.0	22.5		8.5	22.0		6.0	19.5	
70th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
50th %ile Green (s)	6.5	33.5		0.0	22.5		8.4	22.0		6.0	19.6	
50th %ile Term Code	Max	Hold		Skip	Max		Gap	MaxR		Max	Hold	
30th %ile Green (s)	6.5	33.5		0.0	22.5		7.2	22.0		6.0	20.8	
30th %ile Term Code	Max	Hold		Skip	Max		Gap	MaxR		Max	Hold	
10th %ile Green (s)	6.5	33.5		0.0	22.5		0.0	22.0		6.0	32.5	
10th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.35			
Intersection Signal Delay (s/veh): 58.0		Intersection LOS: E	
Intersection Capacity Utilization 64.9%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 75			
70th %ile Actuated Cycle: 75			
50th %ile Actuated Cycle: 75			
30th %ile Actuated Cycle: 75			
10th %ile Actuated Cycle: 75			

Splits and Phases: 21: Smith Ranch Road Road & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	796	4	7	765	92	0	3	6	169	4	130
Future Volume (vph)	87	796	4	7	765	92	0	3	6	169	4	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	40		0	350		0	80		150	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.984			0.895				0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	3536	0	1770	3483	0	1863	1667	0	1770	1863	1583
Flt Permitted	0.168			0.216						0.603		
Satd. Flow (perm)	313	3536	0	402	3483	0	1863	1667	0	1123	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			20			7				176
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5111			6249			1160			437	
Travel Time (s)		116.2			142.0			26.4			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	95	865	4	8	832	100	0	3	7	184	4	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	95	869	0	8	932	0	0	10	0	184	4	141
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												

Lanes, Volumes, Timings
22: CR 90 & Bailey Road

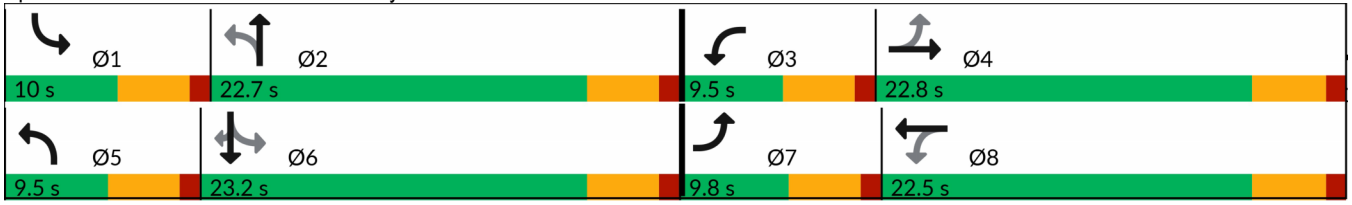
09/16/2024

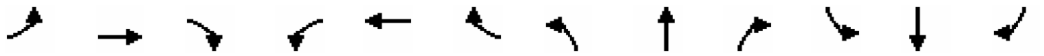
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	9.8	22.8		9.5	22.5		9.5	22.7		10.0	23.2	23.2
Total Split (%)	15.1%	35.1%		14.6%	34.6%		14.6%	34.9%		15.4%	35.7%	35.7%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max		None	Max	Max
Act Effct Green (s)	24.9	23.8		21.9	18.1			18.3		28.3	28.3	28.3
Actuated g/C Ratio	0.40	0.38		0.35	0.29			0.29		0.45	0.45	0.45
v/c Ratio	0.39	0.65		0.03	0.92			0.02		0.33	0.00	0.17
Control Delay (s/veh)	16.2	20.4		11.3	38.7			12.2		13.4	10.5	1.9
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	0.0
Total Delay (s/veh)	16.2	20.4		11.3	38.7			12.2		13.4	10.5	1.9
LOS	B	C		B	D			B		B	B	A
Approach Delay (s/veh)		20.0			38.5			12.2			8.4	
Approach LOS		C			D			B			A	
90th %ile Green (s)	5.3	18.3		5.0	18.0		0.0	18.2		5.5	28.2	28.2
90th %ile Term Code	Max	Max		Max	Max		Skip	MaxR		Max	Hold	Hold
70th %ile Green (s)	5.3	27.8		0.0	18.0		0.0	18.2		5.5	28.2	28.2
70th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
50th %ile Green (s)	5.3	27.8		0.0	18.0		0.0	18.2		5.5	28.2	28.2
50th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
30th %ile Green (s)	5.3	27.8		0.0	18.0		0.0	18.2		5.5	28.2	28.2
30th %ile Term Code	Max	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold
10th %ile Green (s)	0.0	18.0		0.0	18.0		0.0	18.2		5.5	28.2	28.2
10th %ile Term Code	Skip	Hold		Skip	Max		Skip	MaxR		Max	Hold	Hold

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 63
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay (s/veh): 26.0 Intersection LOS: C
Intersection Capacity Utilization 56.2% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 65
70th %ile Actuated Cycle: 65
50th %ile Actuated Cycle: 65
30th %ile Actuated Cycle: 65
10th %ile Actuated Cycle: 55.2

Splits and Phases: 22: CR 90 & Bailey Road





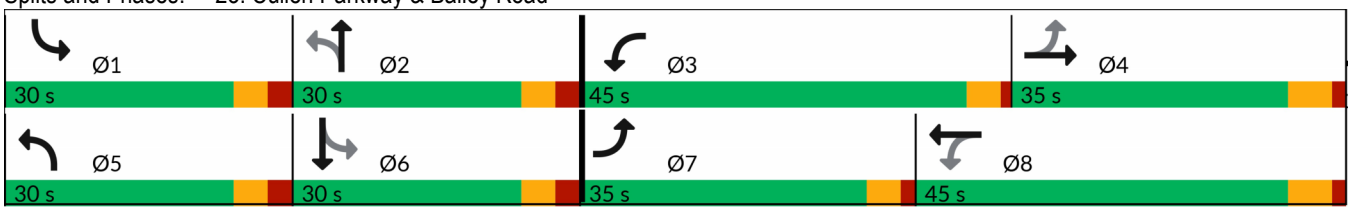
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	798	55	93	796	74	33	41	47	126	142	86
Future Volume (vph)	77	798	55	93	796	74	33	41	47	126	142	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	300		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.990			0.987			0.920			0.944	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3504	0	1770	3493	0	1770	1714	0	1770	1758	0
Flt Permitted	0.151			0.145			0.606			0.567		
Satd. Flow (perm)	281	3504	0	270	3493	0	1129	1714	0	1056	1758	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			7			35			19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		6249			5290			1720			1280	
Travel Time (s)		142.0			120.2			39.1			29.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	84	867	60	101	865	80	36	45	51	137	154	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	927	0	101	945	0	36	96	0	137	247	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

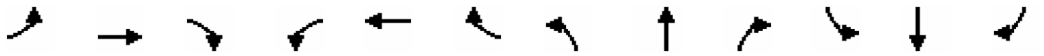
Lanes, Volumes, Timings
23: Cullen Parkway & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	7.0		5.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	30.0	30.0		40.0	40.0		20.0	24.0		25.0	25.0	
Total Split (s)	35.0	35.0		45.0	45.0		30.0	30.0		30.0	30.0	
Total Split (%)	25.0%	25.0%		32.1%	32.1%		21.4%	21.4%		21.4%	21.4%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.0	1.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		4.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	46.3	36.6		47.4	38.7		31.0	24.1		40.4	33.3	
Actuated g/C Ratio	0.45	0.36		0.46	0.38		0.30	0.23		0.39	0.32	
v/c Ratio	0.33	0.74		0.40	0.72		0.09	0.22		0.28	0.43	
Control Delay (s/veh)	17.8	33.4		19.1	32.2		21.7	24.5		22.9	30.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	17.8	33.4		19.1	32.2		21.7	24.5		22.9	30.9	
LOS	B	C		B	C		C	C		C	C	
Approach Delay (s/veh)		32.1			30.9			23.8			28.1	
Approach LOS		C			C			C			C	
90th %ile Green (s)	11.5	39.8		11.2	39.0		8.5	24.0		14.6	30.1	
90th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	9.7	39.6		9.6	39.0		7.5	24.0		12.3	28.8	
70th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	8.6	39.5		8.6	39.0		6.8	24.0		10.8	28.0	
50th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	7.6	35.9		7.6	35.4		0.0	24.0		9.5	39.5	
30th %ile Term Code	Gap	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	29.0		6.5	40.0		0.0	24.0		7.7	37.7	
10th %ile Term Code	Skip	Max		Gap	Hold		Skip	MaxR		Gap	Hold	

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 102.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay (s/veh): 30.6	Intersection LOS: C
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	
90th %ile Actuated Cycle: 112.1	
70th %ile Actuated Cycle: 108	
50th %ile Actuated Cycle: 105.4	
30th %ile Actuated Cycle: 99.5	
10th %ile Actuated Cycle: 89.7	

Splits and Phases: 23: Cullen Parkway & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	705	133	228	721	145	121	385	243	182	487	169
Future Volume (vph)	126	705	133	228	721	145	121	385	243	182	487	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	220		0	330		330	300		300
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.976			0.975				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3451	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.142			0.081			0.136			0.196		
Satd. Flow (perm)	265	3454	0	151	3451	0	253	1863	1583	365	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			11				207			104
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		5290			5252			1738			1472	
Travel Time (s)		80.2			79.6			21.5			18.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	137	766	145	248	784	158	132	418	264	198	529	184
Shared Lane Traffic (%)												
Lane Group Flow (vph)	137	911	0	248	942	0	132	418	264	198	529	184
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												

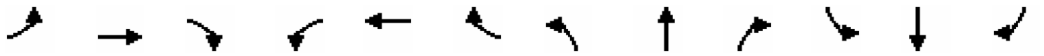
Lanes, Volumes, Timings
24: Manvel Road Road & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	50.0	50.0		50.0	50.0		50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	58.9	44.3		71.2	51.8		58.6	44.3	44.3	67.1	48.7	48.7
Actuated g/C Ratio	0.39	0.30		0.48	0.35		0.39	0.30	0.30	0.45	0.33	0.33
v/c Ratio	0.57	0.89		0.83	0.78		0.56	0.76	0.43	0.60	0.87	0.31
Control Delay (s/veh)	34.7	61.6		62.2	49.9		35.6	59.4	13.6	33.8	64.8	19.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.7	61.6		62.2	49.9		35.6	59.4	13.6	33.8	64.8	19.2
LOS	C	E		E	D		D	E	B	C	E	B
Approach Delay (s/veh)		58.1			52.5			40.7			48.8	
Approach LOS		E			D			D			D	
90th %ile Green (s)	20.8	44.0		31.9	55.1		20.1	44.0	44.0	26.9	50.8	50.8
90th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR	MaxR	Gap	Hold	Hold
70th %ile Green (s)	15.9	44.0		25.1	53.2		15.5	44.0	44.0	20.9	49.4	49.4
70th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR	MaxR	Gap	Hold	Hold
50th %ile Green (s)	12.9	44.0		20.9	52.0		12.6	44.0	44.0	17.3	48.7	48.7
50th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR	MaxR	Gap	Hold	Hold
30th %ile Green (s)	10.9	44.0		17.1	50.2		10.9	44.0	44.0	14.2	47.3	47.3
30th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR	MaxR	Gap	Hold	Hold
10th %ile Green (s)	8.8	44.0		12.6	47.8		8.7	44.0	44.0	11.1	46.4	46.4
10th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR	MaxR	Gap	Hold	Hold

Intersection Summary			
Area Type:	Other		
Cycle Length: 200			
Actuated Cycle Length: 149.6			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay (s/veh): 50.7		Intersection LOS: D	
Intersection Capacity Utilization 87.0%		ICU Level of Service E	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 168.8			
70th %ile Actuated Cycle: 156			
50th %ile Actuated Cycle: 148.2			
30th %ile Actuated Cycle: 141.3			
10th %ile Actuated Cycle: 133.7			

Splits and Phases: 24: Manvel Road Road & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	981	27	22	987	187	15	21	25	155	68	99
Future Volume (vph)	77	981	27	22	987	187	15	21	25	155	68	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.976			0.919			0.911	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3525	0	1770	3454	0	1770	1712	0	1770	1697	0
Flt Permitted	0.078			0.097			0.643			0.655		
Satd. Flow (perm)	145	3525	0	181	3454	0	1198	1712	0	1220	1697	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			10			27			34	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5252			5253			1557			1503	
Travel Time (s)		119.4			119.4			35.4			34.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	84	1066	29	24	1073	203	16	23	27	168	74	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	1095	0	24	1276	0	16	50	0	168	182	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

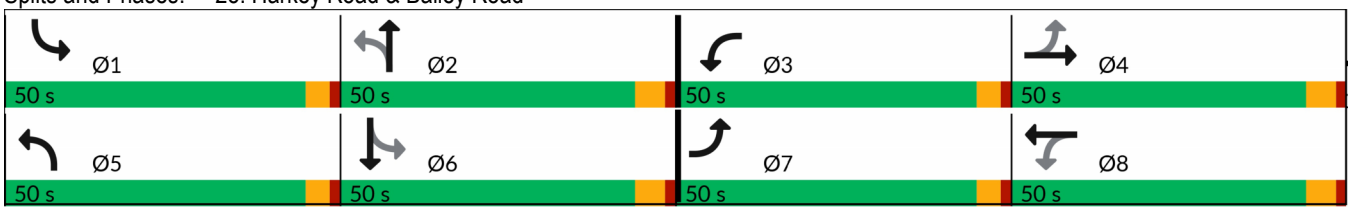
Lanes, Volumes, Timings
25: Harkey Road & Bailey Road

09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	50.0	50.0		50.0	50.0		50.0	50.0		50.0	50.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	25.0%		25.0%	25.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0		5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	59.0	51.6		51.5	44.0		51.2	44.0		62.9	57.3	
Actuated g/C Ratio	0.44	0.39		0.39	0.33		0.39	0.33		0.47	0.43	
v/c Ratio	0.46	0.80		0.16	1.11		0.03	0.09		0.27	0.24	
Control Delay (s/veh)	29.9	42.4		23.9	101.6		19.7	18.3		21.7	21.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	29.9	42.4		23.9	101.6		19.7	18.3		21.7	21.6	
LOS	C	D		C	F		B	B		C	C	
Approach Delay (s/veh)		41.5			100.2			18.6			21.7	
Approach LOS		D			F			B			C	
90th %ile Green (s)	12.6	48.9		7.7	44.0		7.2	44.0		16.9	53.7	
90th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	10.6	47.7		6.9	44.0		6.5	44.0		14.3	51.8	
70th %ile Term Code	Gap	Hold		Gap	Max		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	9.4	47.0		6.4	44.0		0.0	44.0		12.7	61.7	
50th %ile Term Code	Gap	Hold		Gap	Max		Skip	MaxR		Gap	Hold	
30th %ile Green (s)	8.7	57.7		0.0	44.0		0.0	44.0		11.3	60.3	
30th %ile Term Code	Gap	Hold		Skip	Max		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	7.1	56.1		0.0	44.0		0.0	44.0		9.4	58.4	
10th %ile Term Code	Gap	Hold		Skip	Max		Skip	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 200			
Actuated Cycle Length: 132.6			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay (s/veh): 64.9		Intersection LOS: E	
Intersection Capacity Utilization 66.9%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 139.5			
70th %ile Actuated Cycle: 134.9			
50th %ile Actuated Cycle: 132.1			
30th %ile Actuated Cycle: 130			
10th %ile Actuated Cycle: 126.5			

Splits and Phases: 25: Harkey Road & Bailey Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	989	34	31	981	118	10	19	15	84	36	154
Future Volume (vph)	142	989	34	31	981	118	10	19	15	84	36	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	330		0	330		330	150		0	150		150
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.995			0.998	0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3522	0	1770	3383	1441	1770	1863	1583	1770	1863	1583
Flt Permitted	0.080			0.102			0.732			0.674		
Satd. Flow (perm)	149	3522	0	190	3383	1441	1364	1863	1583	1255	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			1	71			71			167
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		5253			2652			1736			277	
Travel Time (s)		119.4			60.3			39.5			6.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	154	1075	37	34	1066	128	11	21	16	91	39	167
Shared Lane Traffic (%)						10%						
Lane Group Flow (vph)	154	1112	0	34	1079	115	11	21	16	91	39	167
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	0	1	2	0	1	2	0
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	0	20	100	0	20	100	0
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		3	8	8	5	2	2	1	6	6
Switch Phase												

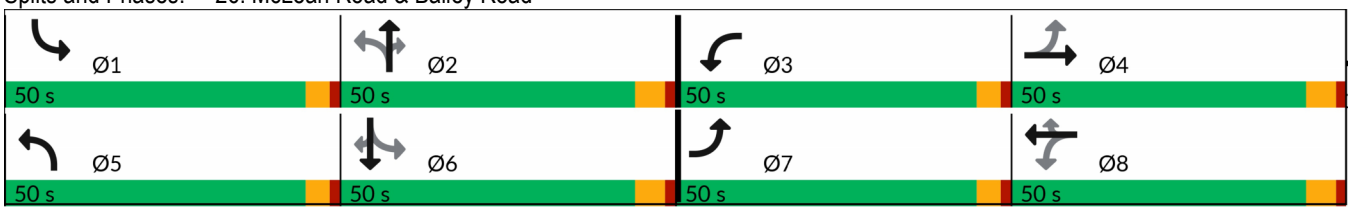
Lanes, Volumes, Timings
26: McLean Road & Bailey Road

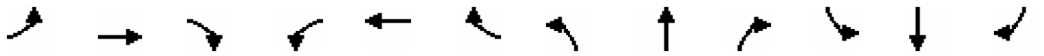
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	50.0	50.0		50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	25.0%	25.0%		25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.5		3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	63.7	53.1		51.9	44.1	44.1	51.1	44.1	44.1	59.7	56.5	56.5
Actuated g/C Ratio	0.48	0.40		0.39	0.33	0.33	0.38	0.33	0.33	0.45	0.42	0.42
v/c Ratio	0.65	0.79		0.22	0.97	0.22	0.02	0.03	0.03	0.15	0.05	0.22
Control Delay (s/veh)	39.9	41.3		23.3	64.1	15.6	22.1	32.7	0.1	22.9	25.5	4.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.9	41.3		23.3	64.1	15.6	22.1	32.7	0.1	22.9	25.5	4.8
LOS	D	D		C	E	B	C	C	A	C	C	A
Approach Delay (s/veh)		41.1			58.4			19.4			13.0	
Approach LOS		D			E			B			B	
90th %ile Green (s)	19.4	55.1		8.3	44.0	44.0	6.9	44.0	44.0	12.7	49.8	49.8
90th %ile Term Code	Gap	Hold		Gap	Max	Max	Gap	MaxR	MaxR	Gap	Hold	Hold
70th %ile Green (s)	15.4	52.0		7.4	44.0	44.0	0.0	44.0	44.0	10.8	59.8	59.8
70th %ile Term Code	Gap	Hold		Gap	Max	Max	Skip	MaxR	MaxR	Gap	Hold	Hold
50th %ile Green (s)	13.1	50.3		6.8	44.0	44.0	0.0	44.0	44.0	9.6	58.6	58.6
50th %ile Term Code	Gap	Hold		Gap	Max	Max	Skip	MaxR	MaxR	Gap	Hold	Hold
30th %ile Green (s)	11.3	49.0		6.3	44.0	44.0	0.0	44.0	44.0	8.5	57.5	57.5
30th %ile Term Code	Gap	Hold		Gap	Max	Max	Skip	MaxR	MaxR	Gap	Hold	Hold
10th %ile Green (s)	9.7	58.7		0.0	44.0	44.0	0.0	44.0	44.0	7.0	56.0	56.0
10th %ile Term Code	Gap	Hold		Skip	Max	Max	Skip	MaxR	MaxR	Gap	Hold	Hold

Intersection Summary			
Area Type:	Other		
Cycle Length: 200			
Actuated Cycle Length: 133.5			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 45.3		Intersection LOS: D	
Intersection Capacity Utilization 62.9%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 142.1			
70th %ile Actuated Cycle: 136.2			
50th %ile Actuated Cycle: 132.7			
30th %ile Actuated Cycle: 129.8			
10th %ile Actuated Cycle: 126.7			

Splits and Phases: 26: McLean Road & Bailey Road





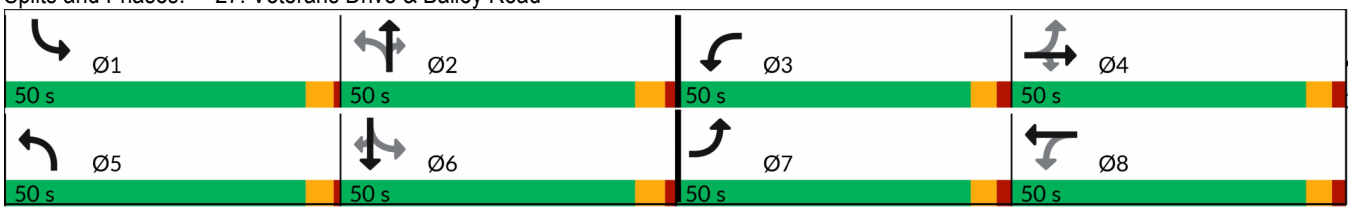
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	690	123	241	1098	142	108	112	151	56	240	127
Future Volume (vph)	73	690	123	241	1098	142	108	112	151	56	240	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		180	150		150	180		180	250		180
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.983				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3479	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.090			0.080			0.415			0.679		
Satd. Flow (perm)	168	1863	1583	149	3479	0	773	1863	1583	1265	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			76		6				164			100
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2652			5774			5367			662	
Travel Time (s)		60.3			131.2			122.0			15.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	79	750	134	262	1193	154	117	122	164	61	261	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	750	134	262	1347	0	117	122	164	61	261	138
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												

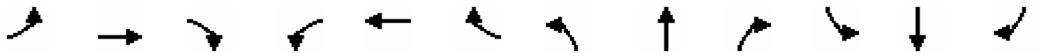
Lanes, Volumes, Timings
27: Veterans Drive & Bailey Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	12.0	12.0	3.0	12.0		3.0	10.0	10.0	3.0	12.0	12.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0	25.0	25.0	25.0	25.0
Total Split (s)	50.0	50.0	50.0	50.0	50.0		50.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%		25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.5	4.5	4.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.0	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	53.6	44.2	44.2	71.7	56.2		60.8	47.7	47.7	53.9	44.2	44.2
Actuated g/C Ratio	0.37	0.30	0.30	0.49	0.39		0.42	0.33	0.33	0.37	0.30	0.30
v/c Ratio	0.48	1.32	0.25	0.84	1.00		0.29	0.20	0.26	0.12	0.46	0.25
Control Delay (s/veh)	35.7	197.2	19.8	61.7	67.9		28.3	37.7	6.3	26.8	45.7	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.7	197.2	19.8	61.7	67.9		28.3	37.7	6.3	26.8	45.7	14.6
LOS	D	F	B	E	E		C	D	A	C	D	B
Approach Delay (s/veh)		159.2			66.9			22.2			33.9	
Approach LOS		F			E			C			C	
90th %ile Green (s)	13.0	44.0	44.0	31.3	62.3		17.1	49.5	49.5	11.6	44.0	44.0
90th %ile Term Code	Gap	Max	Max	Gap	Hold		Gap	Hold	Hold	Gap	MaxR	MaxR
70th %ile Green (s)	10.4	44.0	44.0	25.2	58.8		13.9	48.1	48.1	9.8	44.0	44.0
70th %ile Term Code	Gap	Max	Max	Gap	Hold		Gap	Hold	Hold	Gap	MaxR	MaxR
50th %ile Green (s)	9.2	44.0	44.0	21.4	56.2		12.1	47.5	47.5	8.6	44.0	44.0
50th %ile Term Code	Gap	Max	Max	Gap	Hold		Gap	Hold	Hold	Gap	MaxR	MaxR
30th %ile Green (s)	8.2	44.0	44.0	17.8	53.6		10.4	46.8	46.8	7.6	44.0	44.0
30th %ile Term Code	Gap	Max	Max	Gap	Hold		Gap	Hold	Hold	Gap	MaxR	MaxR
10th %ile Green (s)	6.8	44.0	44.0	13.1	50.3		8.2	45.9	45.9	6.3	44.0	44.0
10th %ile Term Code	Gap	Max	Max	Gap	Hold		Gap	Hold	Hold	Gap	MaxR	MaxR

Intersection Summary			
Area Type:	Other		
Cycle Length: 200			
Actuated Cycle Length: 145.1			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.32			
Intersection Signal Delay (s/veh): 83.1		Intersection LOS: F	
Intersection Capacity Utilization 87.4%		ICU Level of Service E	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 159.4			
70th %ile Actuated Cycle: 150.1			
50th %ile Actuated Cycle: 144.5			
30th %ile Actuated Cycle: 139.2			
10th %ile Actuated Cycle: 132.3			

Splits and Phases: 27: Veterans Drive & Bailey Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	691	139	206	699	158	136	105	104	87	92	55
Future Volume (vph)	65	691	139	206	699	158	136	105	104	87	92	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	400		150	220		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.975			0.972			0.925			0.944	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3451	0	1770	3440	0	1770	3274	0	1770	3341	0
Flt Permitted	0.171			0.093			0.607			0.610		
Satd. Flow (perm)	319	3451	0	173	3440	0	1131	3274	0	1136	3341	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			17			113			60	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2764			1396			1102			1362	
Travel Time (s)		62.8			31.7			25.0			31.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	71	751	151	224	760	172	148	114	113	95	100	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	902	0	224	932	0	148	227	0	95	160	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
28: Old Alvin Rd & McHard Road

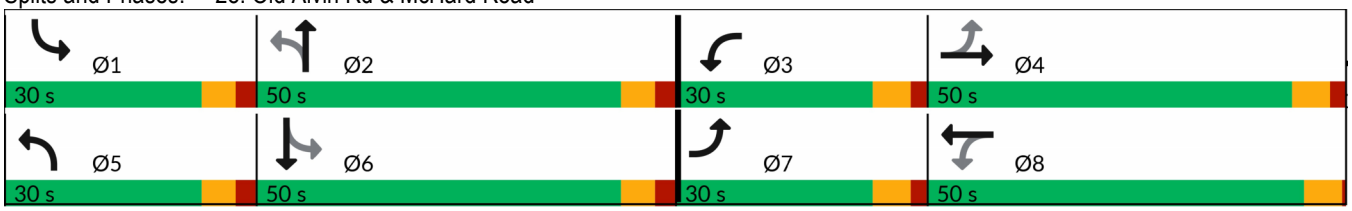
09/16/2024

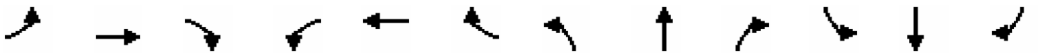
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	20.0	35.0		20.0	35.0		20.0	22.5		20.0	22.5	
Total Split (s)	30.0	50.0		30.0	50.0		30.0	50.0		30.0	50.0	
Total Split (%)	18.8%	31.3%		18.8%	31.3%		18.8%	31.3%		18.8%	31.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	0.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	5.0		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	50.2	41.6		65.6	52.2		56.8	43.7		51.0	40.8	
Actuated g/C Ratio	0.36	0.30		0.47	0.37		0.41	0.31		0.37	0.29	
v/c Ratio	0.35	0.87		0.79	0.72		0.28	0.21		0.21	0.16	
Control Delay (s/veh)	26.4	56.1		52.4	40.3		27.3	19.0		26.7	24.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	26.4	56.1		52.4	40.3		27.3	19.0		26.7	24.8	
LOS	C	E		D	D		C	B		C	C	
Approach Delay (s/veh)		53.9			42.7			22.3			25.5	
Approach LOS		D			D			C			C	
90th %ile Green (s)	11.4	43.5		23.5	57.1		17.9	43.5		13.7	39.3	
90th %ile Term Code	Gap	Max		Max	Hold		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	9.6	43.5		21.9	57.3		15.1	43.5		11.7	40.1	
70th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR		Gap	Hold	
50th %ile Green (s)	8.6	43.5		18.3	54.7		13.2	43.5		10.2	40.5	
50th %ile Term Code	Gap	Max		Gap	Hold		Gap	MaxR		Gap	Hold	
30th %ile Green (s)	7.6	42.7		14.9	51.5		11.2	43.5		8.8	41.1	
30th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	6.3	34.7		11.4	41.3		8.7	43.5		7.0	41.8	
10th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 160
Actuated Cycle Length: 139.4
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay (s/veh): 42.3 Intersection LOS: D
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 150.2
70th %ile Actuated Cycle: 146.6
50th %ile Actuated Cycle: 141.5
30th %ile Actuated Cycle: 135.9
10th %ile Actuated Cycle: 122.6

Splits and Phases: 28: Old Alvin Rd & McHard Road





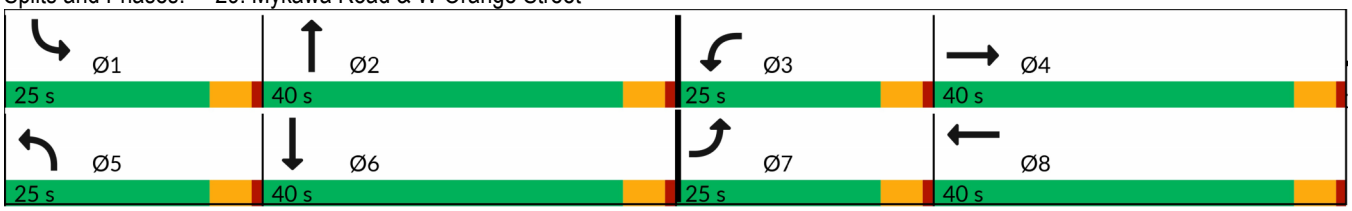
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	160	10	40	151	56	12	222	37	111	709	93
Future Volume (vph)	41	160	10	40	151	56	12	222	37	111	709	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	80		0	80		0	0		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.991			0.959			0.979			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1846	0	1770	1786	0	1770	1824	0	1770	3479	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1846	0	1770	1786	0	1770	1824	0	1770	3479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			14			6			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		647			2722			1670			4217	
Travel Time (s)		14.7			61.9			38.0			95.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	45	174	11	43	164	61	13	241	40	121	771	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	185	0	43	225	0	13	281	0	121	872	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
29: Mykawa Road & W Orange Street 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (s)	25.0	40.0		25.0	40.0		25.0	40.0		25.0	40.0	
Total Split (%)	19.2%	30.8%		19.2%	30.8%		19.2%	30.8%		19.2%	30.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	7.9	16.4		7.8	16.3		6.4	36.1		11.7	50.9	
Actuated g/C Ratio	0.09	0.19		0.09	0.19		0.07	0.41		0.13	0.58	
v/c Ratio	0.28	0.53		0.27	0.65		0.10	0.37		0.51	0.43	
Control Delay (s/veh)	46.1	39.1		46.1	41.7		46.2	22.9		45.8	13.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	46.1	39.1		46.1	41.7		46.2	22.9		45.8	13.9	
LOS	D	D		D	D		D	C		D	B	
Approach Delay (s/veh)		40.5			42.4			23.9			17.8	
Approach LOS		D			D			C			B	
90th %ile Green (s)	11.0	24.5		10.8	24.3		7.7	35.0		17.2	44.5	
90th %ile Term Code	Gap	Hold		Gap	Gap		Gap	MaxR		Gap	Hold	
70th %ile Green (s)	9.0	19.4		8.8	19.2		0.0	35.0		13.7	53.7	
70th %ile Term Code	Gap	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
50th %ile Green (s)	7.8	16.3		7.7	16.2		0.0	35.0		11.7	51.7	
50th %ile Term Code	Gap	Hold		Gap	Gap		Skip	MaxR		Gap	Hold	
30th %ile Green (s)	0.0	13.5		0.0	13.5		0.0	35.0		9.8	49.8	
30th %ile Term Code	Skip	Hold		Skip	Gap		Skip	MaxR		Gap	Hold	
10th %ile Green (s)	0.0	10.0		0.0	10.0		0.0	35.0		7.2	47.2	
10th %ile Term Code	Skip	Min		Skip	Min		Skip	MaxR		Gap	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 87.1			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay (s/veh): 25.4		Intersection LOS: C	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 107.5			
70th %ile Actuated Cycle: 96.9			
50th %ile Actuated Cycle: 90.7			
30th %ile Actuated Cycle: 73.3			
10th %ile Actuated Cycle: 67.2			

Splits and Phases: 29: Mykawa Road & W Orange Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	641	84	198	998	176	58	262	185	317	539	123
Future Volume (vph)	73	641	84	198	998	176	58	262	185	317	539	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	180		150	150		0	180		40
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.983			0.978				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3461	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.219			0.197			0.225			0.380		
Satd. Flow (perm)	408	3479	0	367	3461	0	419	1863	1583	708	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			33				201			182
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		1944			1560			4217			883	
Travel Time (s)		44.2			35.5			71.9			15.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	79	697	91	215	1085	191	63	285	201	345	586	134
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	788	0	215	1276	0	63	285	201	345	586	134
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	0	1	2	0
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	0	20	100	0
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	5	2		1	6		3	8	8	7	4	4
Switch Phase												

Lanes, Volumes, Timings
30: Mykawa Road & McHard Road

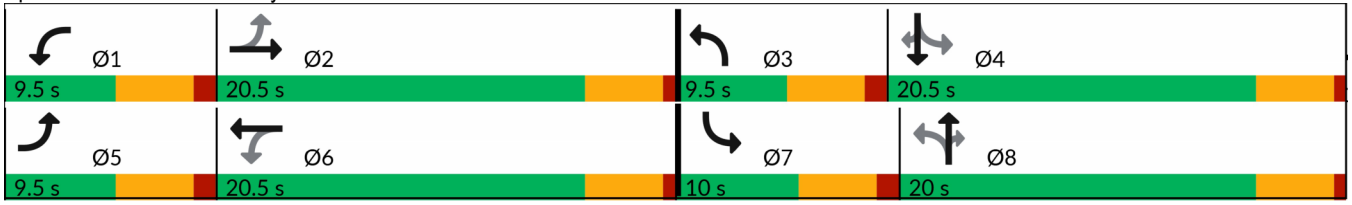
09/16/2024

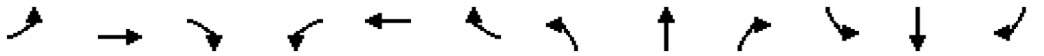
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0	4.0	5.0	4.0	4.0
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0	20.0	9.5	20.0	20.0
Total Split (s)	9.5	20.5		9.5	20.5		9.5	20.0	20.0	10.0	20.5	20.5
Total Split (%)	15.8%	34.2%		15.8%	34.2%		15.8%	33.3%	33.3%	16.7%	34.2%	34.2%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5	0.5	1.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0	4.0	4.5	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max		None	None		None	Max	Max	None	None	None
Act Effct Green (s)	21.0	16.5		22.8	20.3		20.5	16.0	16.0	23.1	20.3	20.3
Actuated g/C Ratio	0.35	0.28		0.38	0.34		0.34	0.27	0.27	0.39	0.34	0.34
v/c Ratio	0.31	0.81		0.84	1.07		0.25	0.57	0.35	0.93	0.93	0.20
Control Delay (s/veh)	14.0	28.0		45.6	72.4		13.1	24.5	5.2	53.2	48.7	2.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.0	28.0		45.6	72.4		13.1	24.5	5.2	53.2	48.7	2.4
LOS	B	C		D	E		B	C	A	D	D	A
Approach Delay (s/veh)		26.8			68.5			16.1			44.3	
Approach LOS		C			E			B			D	
90th %ile Green (s)	5.0	16.5		5.0	16.5		5.0	16.0	16.0	5.5	16.5	16.5
90th %ile Term Code	Max	MaxR		Max	Max		Max	MaxR	MaxR	Max	Max	Max
70th %ile Green (s)	5.0	16.5		5.0	16.5		5.0	16.0	16.0	5.5	16.5	16.5
70th %ile Term Code	Max	MaxR		Max	Max		Max	MaxR	MaxR	Max	Max	Max
50th %ile Green (s)	5.0	16.5		5.0	16.5		5.0	16.0	16.0	5.5	16.5	16.5
50th %ile Term Code	Max	MaxR		Max	Max		Max	MaxR	MaxR	Max	Max	Max
30th %ile Green (s)	0.0	16.5		5.0	26.0		0.0	16.0	16.0	5.5	26.0	26.0
30th %ile Term Code	Skip	MaxR		Max	Hold		Skip	MaxR	MaxR	Max	Hold	Hold
10th %ile Green (s)	0.0	16.5		5.0	26.0		0.0	16.0	16.0	5.5	26.0	26.0
10th %ile Term Code	Skip	MaxR		Max	Hold		Skip	MaxR	MaxR	Max	Hold	Hold

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay (s/veh): 45.7 Intersection LOS: D
Intersection Capacity Utilization 84.1% ICU Level of Service E
Analysis Period (min) 15
90th %ile Actuated Cycle: 60
70th %ile Actuated Cycle: 60
50th %ile Actuated Cycle: 60
30th %ile Actuated Cycle: 60
10th %ile Actuated Cycle: 60

Splits and Phases: 30: Mykawa Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	659	68	191	896	68	50	37	104	44	27	21
Future Volume (vph)	10	659	68	191	896	68	50	37	104	44	27	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		0	100		100	100		100
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.986			0.989			0.889			0.934	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3490	0	1770	3500	0	1770	1656	0	1770	1740	0
Flt Permitted	0.208			0.169			0.723			0.622		
Satd. Flow (perm)	387	3490	0	315	3500	0	1347	1656	0	1159	1740	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			13			113			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2112			2249			716			526	
Travel Time (s)		48.0			51.1			16.3			12.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	11	716	74	208	974	74	54	40	113	48	29	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	790	0	208	1048	0	54	153	0	48	52	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
31: Hatfield Road & McHard Road

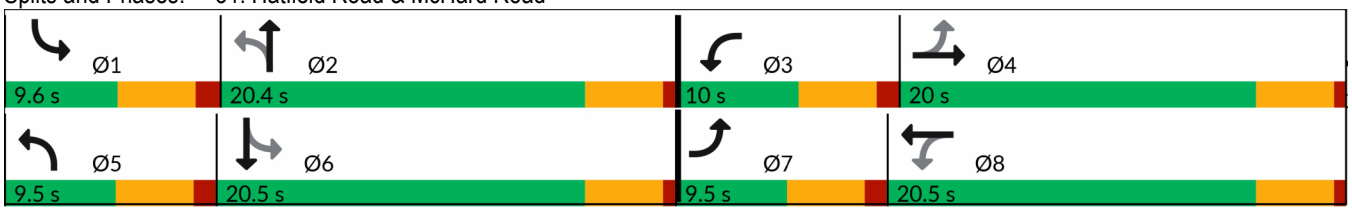
09/16/2024

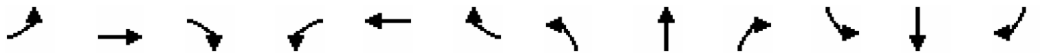
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		10.0	20.5		9.5	20.4		9.6	20.5	
Total Split (%)	15.8%	33.3%		16.7%	34.2%		15.8%	34.0%		16.0%	34.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	20.1	15.5		24.4	23.9		18.8	16.6		19.8	18.4	
Actuated g/C Ratio	0.36	0.28		0.44	0.43		0.34	0.30		0.36	0.33	
v/c Ratio	0.04	0.80		0.73	0.69		0.11	0.27		0.10	0.09	
Control Delay (s/veh)	10.6	27.1		31.5	19.6		11.2	7.9		11.1	10.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.6	27.1		31.5	19.6		11.2	7.9		11.1	10.8	
LOS	B	C		C	B		B	A		B	B	
Approach Delay (s/veh)		26.8			21.6			8.8			11.0	
Approach LOS		C			C			A			B	
90th %ile Green (s)	5.0	16.0		5.5	16.5		5.0	16.4		5.1	16.5	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	0.0	16.0		5.5	26.0		5.0	16.4		5.1	16.5	
70th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Hold	
50th %ile Green (s)	0.0	16.0		5.5	26.0		0.0	16.4		5.1	26.0	
50th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Max	Hold	
30th %ile Green (s)	0.0	16.0		5.5	26.0		0.0	16.4		0.0	16.4	
30th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	13.2		5.5	23.2		0.0	16.4		0.0	16.4	
10th %ile Term Code	Skip	Gap		Max	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 55.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay (s/veh): 21.8 Intersection LOS: C
Intersection Capacity Utilization 56.5% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 60
70th %ile Actuated Cycle: 60
50th %ile Actuated Cycle: 60
30th %ile Actuated Cycle: 50.4
10th %ile Actuated Cycle: 47.6

Splits and Phases: 31: Hatfield Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	614	127	192	715	40	55	47	105	31	49	31
Future Volume (vph)	36	614	127	192	715	40	55	47	105	31	49	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.974			0.992			0.896			0.941	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3447	0	1770	3511	0	1770	1669	0	1770	1753	0
Flt Permitted	0.255			0.184			0.648			0.653		
Satd. Flow (perm)	475	3447	0	343	3511	0	1207	1669	0	1216	1753	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			9			114			34	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2019			2112			892			740	
Travel Time (s)		45.9			48.0			20.3			16.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	39	667	138	209	777	43	60	51	114	34	53	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	805	0	209	820	0	60	165	0	34	87	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
32: Oday Road & McHard Road

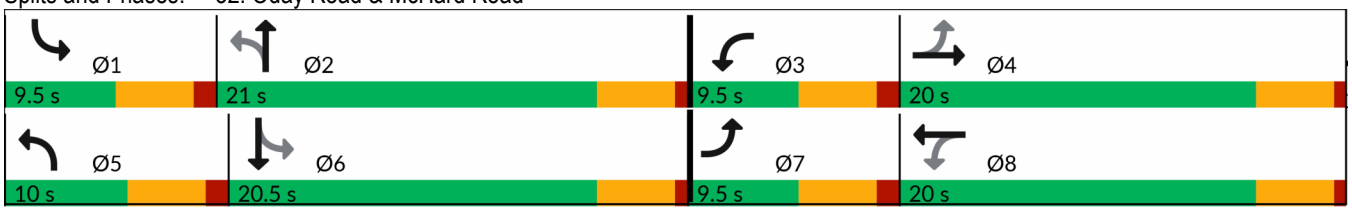
09/16/2024

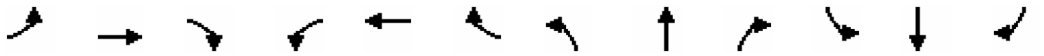
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		9.5	20.0		10.0	21.0		9.5	20.5	
Total Split (%)	15.8%	33.3%		15.8%	33.3%		16.7%	35.0%		15.8%	34.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	20.1	15.6		23.0	21.7		18.6	17.2		17.2	14.9	
Actuated g/C Ratio	0.37	0.29		0.43	0.40		0.35	0.32		0.32	0.28	
v/c Ratio	0.13	0.79		0.74	0.58		0.13	0.27		0.08	0.17	
Control Delay (s/veh)	10.9	24.9		33.9	18.0		11.4	7.8		11.0	12.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.9	24.9		33.9	18.0		11.4	7.8		11.0	12.6	
LOS	B	C		C	B		B	A		B	B	
Approach Delay (s/veh)		24.3			21.2			8.7			12.1	
Approach LOS		C			C			A			B	
90th %ile Green (s)	5.0	16.0		5.0	16.0		5.5	17.0		5.0	16.5	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	5.0	16.0		5.0	16.0		5.5	17.0		5.0	16.5	
70th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
50th %ile Green (s)	0.0	16.0		5.0	25.5		5.5	17.0		0.0	7.0	
50th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Skip	Hold	
30th %ile Green (s)	0.0	16.0		5.0	25.5		0.0	17.0		0.0	17.0	
30th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	13.3		5.0	22.8		0.0	17.0		0.0	17.0	
10th %ile Term Code	Skip	Gap		Max	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 53.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay (s/veh): 20.6 Intersection LOS: C
Intersection Capacity Utilization 58.8% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 60
70th %ile Actuated Cycle: 60
50th %ile Actuated Cycle: 50.5
30th %ile Actuated Cycle: 50.5
10th %ile Actuated Cycle: 47.8

Splits and Phases: 32: Oday Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	682	86	101	671	22	61	25	84	28	27	22
Future Volume (vph)	21	682	86	101	671	22	61	25	84	28	27	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.983			0.995			0.884			0.932	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3522	0	1770	1647	0	1770	1736	0
Flt Permitted	0.262			0.182			0.690			0.681		
Satd. Flow (perm)	488	3479	0	339	3522	0	1285	1647	0	1269	1736	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			5			91			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2021			2019			1010			1120	
Travel Time (s)		45.9			45.9			23.0			25.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	23	741	93	110	729	24	66	27	91	30	29	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	834	0	110	753	0	66	118	0	30	53	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
33: Garden Road & McHard Road

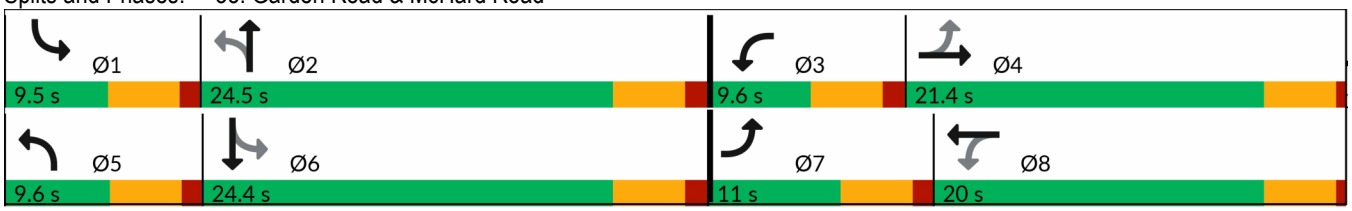
09/16/2024

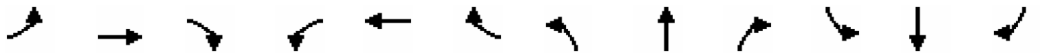
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	22.5		9.5	22.5	
Total Split (s)	11.0	21.4		9.6	20.0		9.6	24.5		9.5	24.4	
Total Split (%)	16.9%	32.9%		14.8%	30.8%		14.8%	37.7%		14.6%	37.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	20.9	16.8		22.4	22.0		24.1	22.3		23.2	20.5	
Actuated g/C Ratio	0.36	0.29		0.38	0.38		0.41	0.38		0.40	0.35	
v/c Ratio	0.07	0.82		0.43	0.57		0.11	0.17		0.05	0.08	
Control Delay (s/veh)	12.2	29.3		17.4	18.9		11.0	6.9		10.5	11.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	12.2	29.3		17.4	18.9		11.0	6.9		10.5	11.1	
LOS	B	C		B	B		B	A		B	B	
Approach Delay (s/veh)		28.9			18.7			8.3			10.9	
Approach LOS		C			B			A			B	
90th %ile Green (s)	6.5	17.4		5.1	16.0		5.1	20.0		5.0	19.9	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	0.0	17.4		5.1	27.0		5.1	20.0		5.0	19.9	
70th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	MaxR	
50th %ile Green (s)	0.0	17.4		5.1	27.0		5.1	29.5		0.0	19.9	
50th %ile Term Code	Skip	Max		Max	Hold		Max	Hold		Skip	MaxR	
30th %ile Green (s)	0.0	17.4		5.1	27.0		0.0	20.0		0.0	20.0	
30th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	13.4		0.0	13.4		0.0	20.0		0.0	20.0	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 58.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay (s/veh): 21.8 Intersection LOS: C
Intersection Capacity Utilization 48.1% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 65
70th %ile Actuated Cycle: 65
50th %ile Actuated Cycle: 65
30th %ile Actuated Cycle: 55.5
10th %ile Actuated Cycle: 41.9

Splits and Phases: 33: Garden Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	756	67	93	625	7	44	6	43	7	9	6
Future Volume (vph)	12	756	67	93	625	7	44	6	43	7	9	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		150	100		0	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988			0.998			0.869			0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	0	1770	3532	0	1770	1619	0	1770	1747	0
Flt Permitted	0.319			0.169			0.688			0.722		
Satd. Flow (perm)	594	3497	0	315	3532	0	1282	1619	0	1345	1747	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			2			47			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1957			2021			616			706	
Travel Time (s)		44.5			45.9			14.0			16.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	13	822	73	101	679	8	48	7	47	8	10	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	895	0	101	687	0	48	54	0	8	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
34: Roy Road & McHard Road

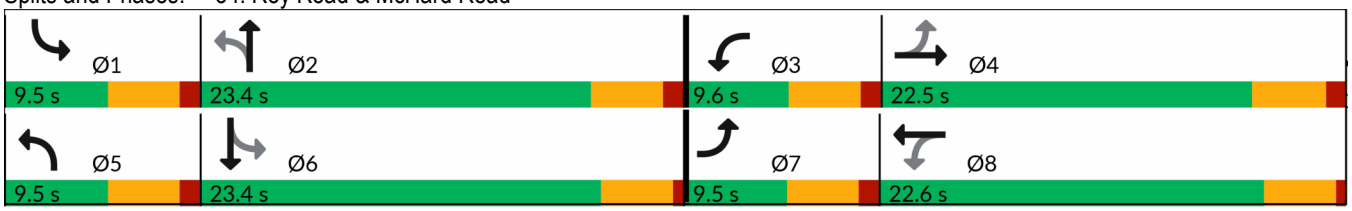
09/16/2024

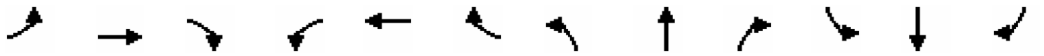
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	5.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	22.5		9.5	20.0	
Total Split (s)	9.5	22.5		9.6	22.6		9.5	23.4		9.5	23.4	
Total Split (%)	14.6%	34.6%		14.8%	34.8%		14.6%	36.0%		14.6%	36.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	1.0		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.5		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	21.3	17.5		24.0	23.6		23.8	22.9		22.1	20.0	
Actuated g/C Ratio	0.36	0.30		0.41	0.40		0.41	0.39		0.38	0.34	
v/c Ratio	0.04	0.85		0.39	0.48		0.09	0.08		0.01	0.03	
Control Delay (s/veh)	11.4	30.5		15.8	15.7		11.3	6.5		10.7	13.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	11.4	30.5		15.8	15.7		11.3	6.5		10.7	13.2	
LOS	B	C		B	B		B	A		B	B	
Approach Delay (s/veh)		30.3			15.7			8.8			12.4	
Approach LOS		C			B			A			B	
90th %ile Green (s)	5.0	18.0		5.1	18.6		5.0	18.9		5.0	19.4	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	MaxR	
70th %ile Green (s)	0.0	18.0		5.1	28.1		5.0	28.4		0.0	19.4	
70th %ile Term Code	Skip	Max		Max	Hold		Max	Hold		Skip	MaxR	
50th %ile Green (s)	0.0	18.0		5.1	28.1		5.0	28.4		0.0	19.4	
50th %ile Term Code	Skip	Max		Max	Hold		Max	Hold		Skip	MaxR	
30th %ile Green (s)	0.0	18.0		5.1	28.1		0.0	18.9		0.0	19.4	
30th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Skip	MaxR	
10th %ile Green (s)	0.0	14.5		0.0	15.0		0.0	18.9		0.0	19.4	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	MaxR	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 58.6
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay (s/veh): 22.5 Intersection LOS: C
Intersection Capacity Utilization 48.5% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 65
70th %ile Actuated Cycle: 65
50th %ile Actuated Cycle: 65
30th %ile Actuated Cycle: 55.5
10th %ile Actuated Cycle: 42.4

Splits and Phases: 34: Roy Road & McHard Road





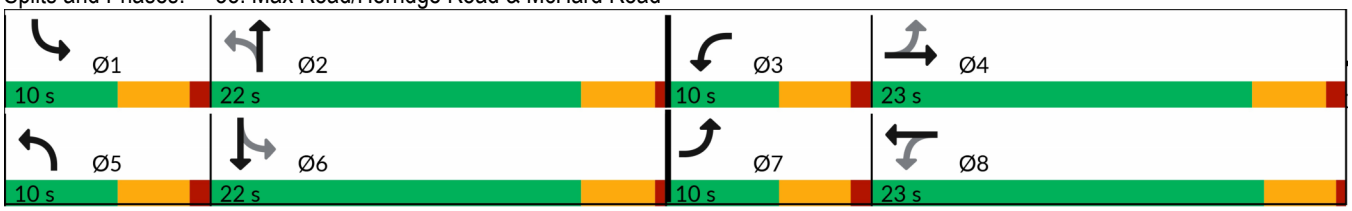
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	715	75	112	610	10	47	25	62	9	12	7
Future Volume (vph)	13	715	75	112	610	10	47	25	62	9	12	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	120		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.986			0.998			0.893			0.943	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3490	0	1770	3532	0	1770	1663	0	1770	1757	0
Flt Permitted	0.357			0.168			0.607			0.696		
Satd. Flow (perm)	665	3490	0	313	3532	0	1131	1663	0	1296	1757	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			3			67			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2239			1957			302			796	
Travel Time (s)		50.9			44.5			6.9			18.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	14	777	82	122	663	11	51	27	67	10	13	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	859	0	122	674	0	51	94	0	10	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

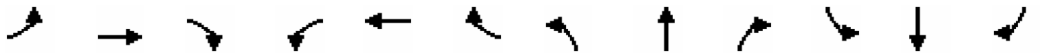
Lanes, Volumes, Timings
35: Max Road/Herridge Road & McHard Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	22.5		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	10.0	23.0		10.0	23.0		10.0	22.0		10.0	22.0	
Total Split (%)	15.4%	35.4%		15.4%	35.4%		15.4%	33.8%		15.4%	33.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	21.6	17.5		24.2	23.9		18.9	18.5		16.6	16.2	
Actuated g/C Ratio	0.40	0.32		0.45	0.44		0.35	0.34		0.31	0.30	
v/c Ratio	0.04	0.75		0.42	0.43		0.10	0.15		0.02	0.04	
Control Delay (s/veh)	9.0	22.8		13.3	12.7		13.0	7.8		15.1	14.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	9.0	22.8		13.3	12.7		13.0	7.8		15.1	14.7	
LOS	A	C		B	B		B	A		B	B	
Approach Delay (s/veh)		22.5			12.8			9.7			14.8	
Approach LOS		C			B			A			B	
90th %ile Green (s)	5.5	18.5		5.5	19.0		5.5	18.0		5.5	18.0	
90th %ile Term Code	Max	Max		Max	Max		Max	MaxR		Max	Hold	
70th %ile Green (s)	0.0	18.5		5.5	29.0		17.5	18.0		0.0	0.0	
70th %ile Term Code	Skip	Max		Max	Hold		Hold	MaxR		Skip	Skip	
50th %ile Green (s)	0.0	18.5		5.5	29.0		0.0	18.0		0.0	18.0	
50th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Skip	Hold	
30th %ile Green (s)	0.0	18.5		5.5	29.0		0.0	18.0		0.0	18.0	
30th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Skip	Hold	
10th %ile Green (s)	0.0	12.8		0.0	13.3		0.0	18.0		0.0	18.0	
10th %ile Term Code	Skip	Gap		Skip	Hold		Skip	MaxR		Skip	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 53.9			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay (s/veh): 17.2		Intersection LOS: B	
Intersection Capacity Utilization 48.5%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 55			
50th %ile Actuated Cycle: 55			
30th %ile Actuated Cycle: 55			
10th %ile Actuated Cycle: 39.3			

Splits and Phases: 35: Max Road/Herridge Road & McHard Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	246	577	364	93	481	189	274	838	74	295	1510	286
Future Volume (vph)	246	577	364	93	481	189	274	838	74	295	1510	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	120		0	300		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.942			0.958			0.988			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3334	0	1770	3391	0	1770	3497	0	1770	3454	0
Flt Permitted	0.140			0.096			0.101			0.096		
Satd. Flow (perm)	261	3334	0	179	3391	0	188	3497	0	179	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		87			36			5			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		283			3590			1925			1330	
Travel Time (s)		6.4			81.6			43.8			30.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	267	627	396	101	523	205	298	911	80	321	1641	311
Shared Lane Traffic (%)												
Lane Group Flow (vph)	267	1023	0	101	728	0	298	991	0	321	1952	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
36: Cullen Boulevard & McHard Road

09/16/2024

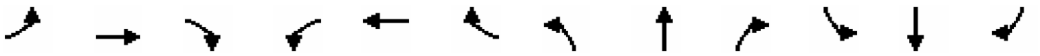
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	7.0		3.0	7.0		3.0	5.0		5.0	3.0	
Minimum Split (s)	25.0	40.0		25.0	40.0		25.0	23.5		20.0	23.5	
Total Split (s)	30.0	65.0		30.0	65.0		35.0	45.0		35.0	30.0	
Total Split (%)	17.1%	37.1%		17.1%	37.1%		20.0%	25.7%		20.0%	17.1%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.0		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	5.5		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	68.0	51.2		52.7	41.5		65.8	39.8		69.3	41.6	
Actuated g/C Ratio	0.45	0.34		0.35	0.27		0.43	0.26		0.45	0.27	
v/c Ratio	0.84	0.87		0.56	0.77		0.85	1.08		0.87	2.06	
Control Delay (s/veh)	55.4	52.7		41.1	54.7		66.1	106.3		67.5	506.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	55.4	52.7		41.1	54.7		66.1	106.3		67.5	506.8	
LOS	E	D		D	D		E	F		E	F	
Approach Delay (s/veh)		53.3			53.0			97.0			444.8	
Approach LOS		D			D			F			F	
90th %ile Green (s)	24.0	59.5		16.4	51.4		29.5	39.5		29.5	39.5	
90th %ile Term Code	Max	Max		Gap	Hold		Max	MaxR		Max	Hold	
70th %ile Green (s)	23.2	59.5		13.2	49.0		29.5	39.5		29.5	39.5	
70th %ile Term Code	Gap	Max		Gap	Hold		Max	MaxR		Max	Hold	
50th %ile Green (s)	21.7	53.2		10.8	41.8		29.5	39.5		29.5	39.5	
50th %ile Term Code	Gap	Gap		Gap	Hold		Max	MaxR		Max	Hold	
30th %ile Green (s)	18.9	47.1		9.3	37.0		24.4	39.5		29.1	44.2	
30th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	
10th %ile Green (s)	15.0	38.3		7.4	30.2		18.1	39.5		21.4	42.8	
10th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Gap	Hold	

Intersection Summary

Area Type: Other
Cycle Length: 175
Actuated Cycle Length: 152.7
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.06
Intersection Signal Delay (s/veh): 219.8 Intersection LOS: F
Intersection Capacity Utilization 118.2% ICU Level of Service H
Analysis Period (min) 15
90th %ile Actuated Cycle: 167.4
70th %ile Actuated Cycle: 164.2
50th %ile Actuated Cycle: 155.5
30th %ile Actuated Cycle: 147.5
10th %ile Actuated Cycle: 129.1

Splits and Phases: 36: Cullen Boulevard & McHard Road



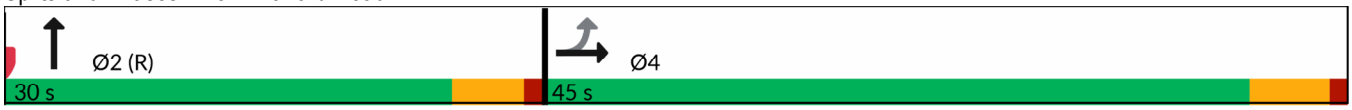


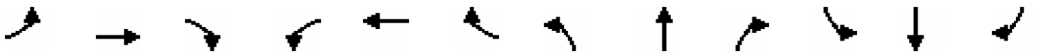
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	209	1121	0	0	0	0	0	99	36	0	0	0
Future Volume (vph)	209	1121	0	0	0	0	0	99	36	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.960				
Flt Protected	0.950											
Satd. Flow (prot)	1770	3539	0	0	0	0	0	3398	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	3539	0	0	0	0	0	3398	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	227							39				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		553			824			256			481	
Travel Time (s)		12.6			18.7			5.8			10.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	227	1218	0	0	0	0	0	108	39	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	1218	0	0	0	0	0	147	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2				
Detector Template	Left	Thru						Thru				
Leading Detector (ft)	20	100						100				
Trailing Detector (ft)	0	0						0				
Turn Type	Perm	NA						NA				
Protected Phases		4						2				
Permitted Phases	4											
Detector Phase	4	4						2				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	20.0	20.0						10.0				
Minimum Split (s)	35.0	35.0						25.0				
Total Split (s)	45.0	45.0						30.0				
Total Split (%)	60.0%	60.0%						40.0%				
Yellow Time (s)	4.5	4.5						4.0				
All-Red Time (s)	1.0	1.0						1.0				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	5.5	5.5						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None						C-Max				
Act Effct Green (s)	36.1	36.1						28.4				
Actuated g/C Ratio	0.48	0.48						0.38				
v/c Ratio	0.23	0.72						0.11				
Control Delay (s/veh)	2.1	17.7						12.6				
Queue Delay	0.0	0.0						0.0				
Total Delay (s/veh)	2.1	17.7						12.6				
LOS	A	B						B				
Approach Delay (s/veh)		15.3						12.6				
Approach LOS		B						B				
90th %ile Green (s)	39.5	39.5						25.0				
90th %ile Term Code	Max	Max						Coord				
70th %ile Green (s)	39.5	39.5						25.0				
70th %ile Term Code	Max	Max						Coord				
50th %ile Green (s)	38.0	38.0						26.5				
50th %ile Term Code	Gap	Gap						Coord				
30th %ile Green (s)	34.4	34.4						30.1				
30th %ile Term Code	Gap	Gap						Coord				
10th %ile Green (s)	29.1	29.1						35.4				
10th %ile Term Code	Gap	Gap						Coord				

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay (s/veh): 15.0		Intersection LOS: B	
Intersection Capacity Utilization 92.3%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 37: McHard Road



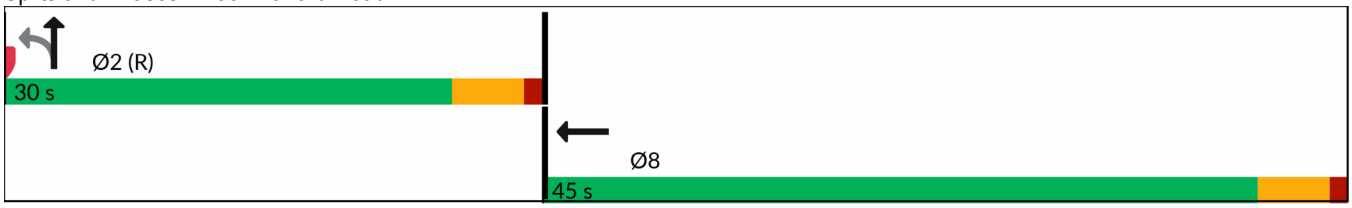


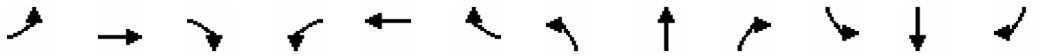
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1024	80	124	188	0	0	0	0
Future Volume (vph)	0	0	0	0	1024	80	124	188	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.989							
Flt Protected								0.980				
Satd. Flow (prot)	0	0	0	0	3500	0	0	3468	0	0	0	0
Flt Permitted								0.980				
Satd. Flow (perm)	0	0	0	0	3500	0	0	3468	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					16			67				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		651			3717			481			228	
Travel Time (s)		14.8			84.5			10.9			5.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	1113	87	135	204	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1200	0	0	339	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Turn Type					NA		Perm	NA				
Protected Phases					8			2				
Permitted Phases							2					
Detector Phase					8		2	2				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)					20.0		10.0	10.0				
Minimum Split (s)					35.0		25.0	25.0				
Total Split (s)					45.0		30.0	30.0				
Total Split (%)					60.0%		40.0%	40.0%				
Yellow Time (s)					4.0		4.0	4.0				
All-Red Time (s)					1.0		1.0	1.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode					None		C-Max	C-Max				
Act Effct Green (s)					35.0			30.0				
Actuated g/C Ratio					0.47			0.40				
v/c Ratio					0.73			0.24				
Control Delay (s/veh)					18.5			11.8				
Queue Delay					0.0			0.0				
Total Delay (s/veh)					18.5			11.8				
LOS					B			B				
Approach Delay (s/veh)					18.5			11.8				
Approach LOS					B			B				
90th %ile Green (s)					40.0		25.0	25.0				
90th %ile Term Code					Max		Coord	Coord				
70th %ile Green (s)					38.9		26.1	26.1				
70th %ile Term Code					Gap		Coord	Coord				
50th %ile Green (s)					36.0		29.0	29.0				
50th %ile Term Code					Gap		Coord	Coord				
30th %ile Green (s)					32.6		32.4	32.4				
30th %ile Term Code					Gap		Coord	Coord				
10th %ile Green (s)					27.4		37.6	37.6				
10th %ile Term Code					Gap		Coord	Coord				

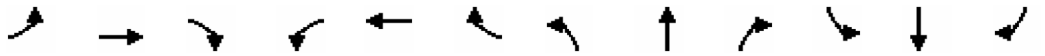
Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 17.0		Intersection LOS: B	
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 38: McHard Road





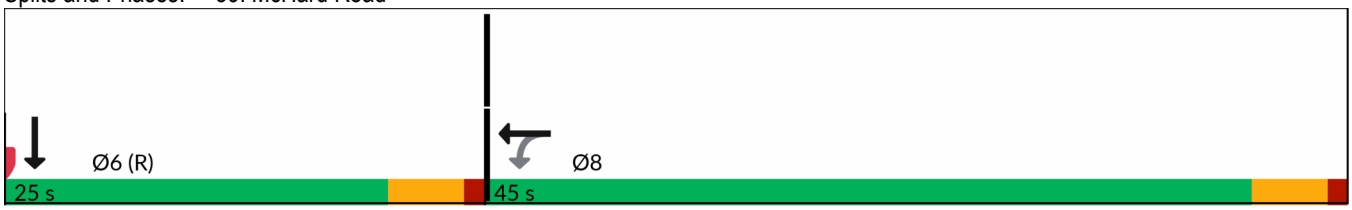
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	70	1084	0	0	0	0	0	61	112
Future Volume (vph)	0	0	0	70	1084	0	0	0	0	0	61	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt											0.903	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1770	3539	0	0	0	0	0	3196	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1770	3539	0	0	0	0	0	3196	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)				76							70	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1629			651			450			272	
Travel Time (s)		37.0			14.8			10.2			6.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	76	1178	0	0	0	0	0	66	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	76	1178	0	0	0	0	0	188	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2						2	
Detector Template				Left	Thru						Thru	
Leading Detector (ft)				20	100						100	
Trailing Detector (ft)				0	0						0	
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Detector Phase				8	8						6	
Switch Phase												

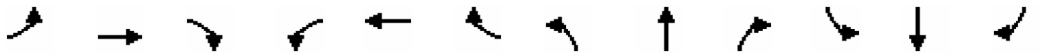


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				20.0	20.0						10.0	
Minimum Split (s)				35.0	35.0						23.0	
Total Split (s)				45.0	45.0						25.0	
Total Split (%)				64.3%	64.3%						35.7%	
Yellow Time (s)				4.0	4.0						4.0	
All-Red Time (s)				1.0	1.0						1.0	
Lost Time Adjust (s)				0.0	0.0						0.0	
Total Lost Time (s)				5.0	5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				None	None						C-Max	
Act Effct Green (s)				33.9	33.9						26.1	
Actuated g/C Ratio				0.48	0.48						0.37	
v/c Ratio				0.08	0.69						0.15	
Control Delay (s/veh)				2.2	15.8						11.1	
Queue Delay				0.0	0.0						0.0	
Total Delay (s/veh)				2.2	15.8						11.1	
LOS				A	B						B	
Approach Delay (s/veh)					15.0						11.1	
Approach LOS					B						B	
90th %ile Green (s)				40.0	40.0						20.0	
90th %ile Term Code				Max	Max						Coord	
70th %ile Green (s)				37.7	37.7						22.3	
70th %ile Term Code				Gap	Gap						Coord	
50th %ile Green (s)				34.8	34.8						25.2	
50th %ile Term Code				Gap	Gap						Coord	
30th %ile Green (s)				31.4	31.4						28.6	
30th %ile Term Code				Gap	Gap						Coord	
10th %ile Green (s)				25.4	25.4						34.6	
10th %ile Term Code				Gap	Gap						Coord	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 14.5		Intersection LOS: B	
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 39: McHard Road



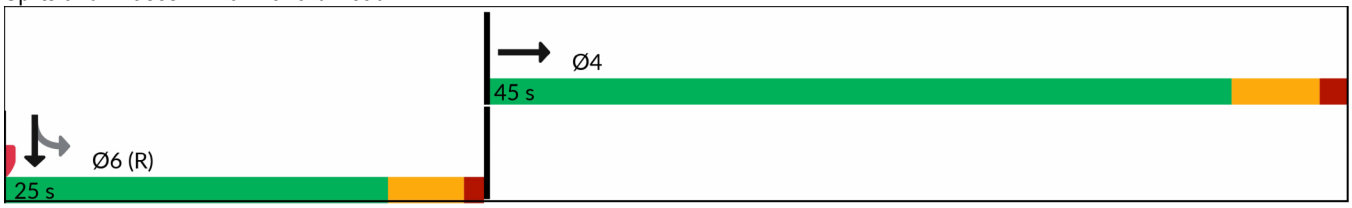


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1269	129	0	0	0	0	0	0	65	64	0
Future Volume (vph)	0	1269	129	0	0	0	0	0	0	65	64	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor												
Frt		0.986										
Flt Protected											0.975	
Satd. Flow (prot)	0	3490	0	0	0	0	0	0	0	0	3451	0
Flt Permitted											0.975	
Satd. Flow (perm)	0	3490	0	0	0	0	0	0	0	0	3451	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		25									47	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1663			553			168			450	
Travel Time (s)		37.8			12.6			3.8			10.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1379	140	0	0	0	0	0	0	71	70	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1519	0	0	0	0	0	0	0	0	141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2								1	2	
Detector Template		Thru								Left	Thru	
Leading Detector (ft)		100								20	100	
Trailing Detector (ft)		0								0	0	
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Detector Phase		4								6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		20.0								10.0	10.0	
Minimum Split (s)		35.0								23.0	23.0	
Total Split (s)		45.0								25.0	25.0	
Total Split (%)		64.3%								35.7%	35.7%	
Yellow Time (s)		4.5								4.0	4.0	
All-Red Time (s)		1.5								1.0	1.0	
Lost Time Adjust (s)		0.0									0.0	
Total Lost Time (s)		6.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None								C-Max	C-Max	
Act Effct Green (s)		37.7									21.3	
Actuated g/C Ratio		0.54									0.30	
v/c Ratio		0.80									0.13	
Control Delay (s/veh)		16.7									10.2	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		16.7									10.2	
LOS		B									B	
Approach Delay (s/veh)		16.7									10.2	
Approach LOS		B									B	
90th %ile Green (s)		39.0								20.0	20.0	
90th %ile Term Code		Max								Coord	Coord	
70th %ile Green (s)		39.0								20.0	20.0	
70th %ile Term Code		Max								Coord	Coord	
50th %ile Green (s)		39.0								20.0	20.0	
50th %ile Term Code		Max								Coord	Coord	
30th %ile Green (s)		38.2								20.8	20.8	
30th %ile Term Code		Gap								Coord	Coord	
10th %ile Green (s)		33.3								25.7	25.7	
10th %ile Term Code		Gap								Coord	Coord	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay (s/veh): 16.2		Intersection LOS: B	
Intersection Capacity Utilization 56.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 40: McHard Road

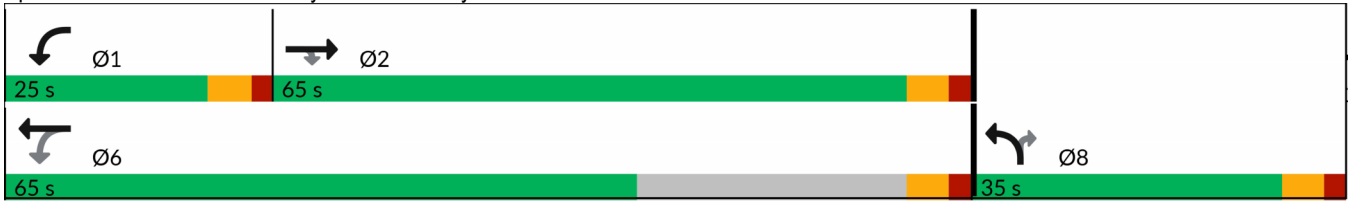


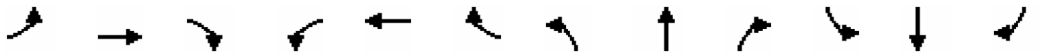
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	628	474	188	829	253	93
Future Volume (vph)	628	474	188	829	253	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	120		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		0	
Lane Util. Factor	0.91	0.91	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.973	0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3299	1441	1770	3539	1770	1583
Flt Permitted			0.158		0.950	
Satd. Flow (perm)	3299	1441	294	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	26	366				101
Link Speed (mph)	30			30	30	
Link Distance (ft)	975			186	512	
Travel Time (s)	22.2			4.2	11.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	683	515	204	901	275	101
Shared Lane Traffic (%)		29%				
Lane Group Flow (vph)	832	366	204	901	275	101
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	1	6	8	8
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	20.0	20.0	3.0	20.0	5.0	5.0
Minimum Split (s)	65.0	65.0	20.0	45.0	25.0	25.0
Total Split (s)	65.0	65.0	25.0	65.0	35.0	35.0
Total Split (%)	52.0%	52.0%	20.0%	52.0%	28.0%	28.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Max	Max
Act Effct Green (s)	32.5	32.5	49.3	49.3	29.4	29.4
Actuated g/C Ratio	0.36	0.36	0.54	0.54	0.32	0.32
v/c Ratio	0.70	0.49	0.61	0.47	0.48	0.17
Control Delay (s/veh)	27.2	4.5	18.9	13.2	30.6	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.2	4.5	18.9	13.2	30.6	6.8
LOS	C	A	B	B	C	A
Approach Delay (s/veh)	20.3			14.2	24.2	
Approach LOS	C			B	C	
90th %ile Green (s)	46.5	46.5	13.9	66.4	29.0	29.0
90th %ile Term Code	Gap	Gap	Gap	Hold	MaxR	MaxR
70th %ile Green (s)	37.3	37.3	12.0	55.3	29.0	29.0
70th %ile Term Code	Gap	Gap	Gap	Hold	MaxR	MaxR
50th %ile Green (s)	32.2	32.2	10.8	49.0	29.0	29.0
50th %ile Term Code	Gap	Gap	Gap	Hold	MaxR	MaxR
30th %ile Green (s)	27.3	27.3	9.6	42.9	29.0	29.0
30th %ile Term Code	Gap	Gap	Gap	Hold	MaxR	MaxR
10th %ile Green (s)	21.6	21.6	8.1	35.7	29.0	29.0
10th %ile Term Code	Gap	Gap	Gap	Hold	MaxR	MaxR

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 90.9			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 18.3		Intersection LOS: B	
Intersection Capacity Utilization 61.8%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 107.4			
70th %ile Actuated Cycle: 96.3			
50th %ile Actuated Cycle: 90			
30th %ile Actuated Cycle: 83.9			
10th %ile Actuated Cycle: 76.7			

Splits and Phases: 41: County Place Parkway & McHard Road



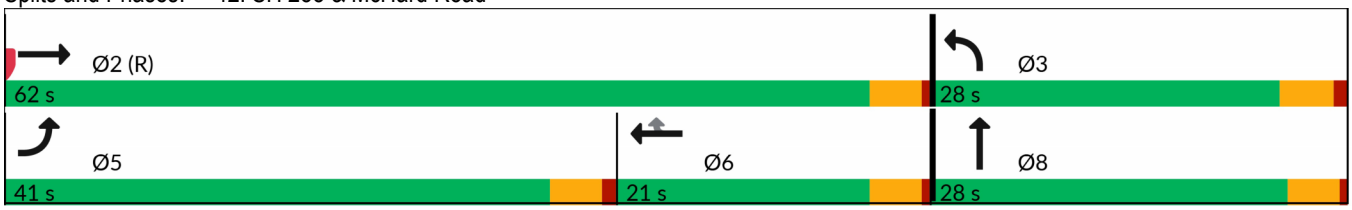


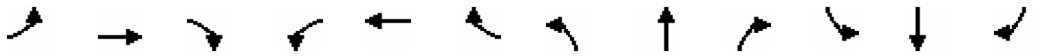
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	913	1901	0	0	737	508	573	389	192	0	0	0
Future Volume (vph)	913	1901	0	0	737	508	573	389	192	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850		0.950				
Flt Protected	0.950	0.998					0.950					
Satd. Flow (prot)	1610	3383	0	0	5085	1583	1770	3362	0	0	0	0
Flt Permitted	0.950	0.734					0.950					
Satd. Flow (perm)	1610	2488	0	0	5085	1583	1770	3362	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						78		92				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		505			975			278			566	
Travel Time (s)		11.5			22.2			6.3			12.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	992	2066	0	0	801	552	623	423	209	0	0	0
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	893	2165	0	0	801	552	623	632	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Turn Type	Prot	NA			NA	Perm	Prot	NA				
Protected Phases	5	2			6		3	8				
Permitted Phases						6						
Detector Phase	5	2			6	6	3	8				
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0			4.0	4.0	5.0	4.0				
Minimum Split (s)	9.5	20.0			20.0	20.0	9.5	20.0				
Total Split (s)	41.0	62.0			21.0	21.0	28.0	28.0				
Total Split (%)	45.6%	68.9%			23.3%	23.3%	31.1%	31.1%				
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5				
All-Red Time (s)	1.0	0.5			0.5	0.5	1.0	0.5				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	4.0			4.0	4.0	4.5	4.0				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	None	C-Max			None	None	None	Max				
Act Effct Green (s)	36.5	58.0			17.0	17.0	23.5	24.0				
Actuated g/C Ratio	0.41	0.64			0.19	0.19	0.26	0.27				
v/c Ratio	1.37	1.40			0.83	1.52	1.35	0.66				
Control Delay (s/veh)	190.9	198.7			44.1	275.7	200.6	28.6				
Queue Delay	0.0	0.2			0.0	0.0	0.2	0.0				
Total Delay (s/veh)	190.9	198.9			44.1	275.7	200.7	28.6				
LOS	F	F			D	F	F	C				
Approach Delay (s/veh)		196.6			138.6			114.1				
Approach LOS		F			F			F				
90th %ile Green (s)	36.5	58.0			17.0	17.0	23.5	24.0				
90th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
70th %ile Green (s)	36.5	58.0			17.0	17.0	23.5	24.0				
70th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
50th %ile Green (s)	36.5	58.0			17.0	17.0	23.5	24.0				
50th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
30th %ile Green (s)	36.5	58.0			17.0	17.0	23.5	24.0				
30th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				
10th %ile Green (s)	36.5	58.0			17.0	17.0	23.5	24.0				
10th %ile Term Code	Max	Coord			Coord	Coord	Max	MaxR				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.52			
Intersection Signal Delay (s/veh): 164.4		Intersection LOS: F	
Intersection Capacity Utilization 149.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 42: SH 288 & McHard Road



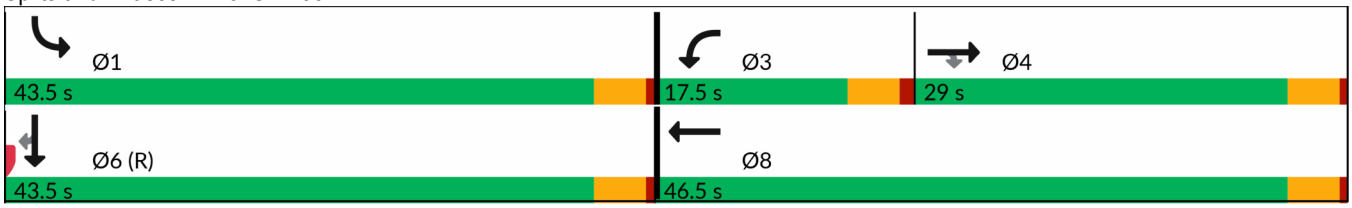


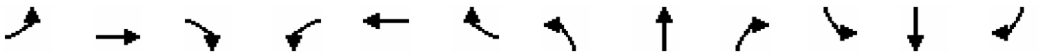
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱	↰	↑↑					↰	↑↑	↱
Traffic Volume (vph)	0	1858	588	321	1220	0	0	0	0	1002	660	647
Future Volume (vph)	0	1858	588	321	1220	0	0	0	0	1002	660	647
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	5085	1583	1770	3539	0	0	0	0	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105									67
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		807			505			209			785	
Travel Time (s)		18.3			11.5			4.8			17.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	2020	639	349	1326	0	0	0	0	1089	717	703
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2020	639	349	1326	0	0	0	0	1089	717	703
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Turn Type		NA	Perm	Prot	NA					Prot	NA	Perm
Protected Phases		4		3	8					1	6	
Permitted Phases			4									6
Detector Phase		4	4	3	8					1	6	6
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)		4.0	4.0	5.0	4.0					4.0	4.0	4.0
Minimum Split (s)		20.0	20.0	9.5	20.0					20.0	20.0	20.0
Total Split (s)		29.0	29.0	17.5	46.5					43.5	43.5	43.5
Total Split (%)		32.2%	32.2%	19.4%	51.7%					48.3%	48.3%	48.3%
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	3.5
All-Red Time (s)		0.5	0.5	1.0	0.5					0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0	4.5	4.0					4.0	4.0	4.0
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		None	None	None	None					Max	C-Max	C-Max
Act Effct Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
Actuated g/C Ratio		0.28	0.28	0.14	0.47					0.44	0.44	0.44
v/c Ratio		1.43	1.24	1.37	0.79					1.40	0.46	0.96
Control Delay (s/veh)		226.4	150.6	215.8	13.1					214.3	19.0	48.8
Queue Delay		0.6	0.0	0.0	1.4					8.6	0.0	0.0
Total Delay (s/veh)		227.0	150.6	215.8	14.5					222.9	19.0	48.8
LOS		F	F	F	B					F	B	D
Approach Delay (s/veh)		208.7			56.4						115.9	
Approach LOS		F			E						F	
90th %ile Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
90th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
70th %ile Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
70th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
50th %ile Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
50th %ile Term Code		Max	Max	Max	Max					Coord	Coord	Coord
30th %ile Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
30th %ile Term Code		Max	Max	Max	Hold					Coord	Coord	Coord
10th %ile Green (s)		25.0	25.0	13.0	42.5					39.5	39.5	39.5
10th %ile Term Code		Max	Max	Max	Hold					Coord	Coord	Coord

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.43			
Intersection Signal Delay (s/veh): 137.4		Intersection LOS: F	
Intersection Capacity Utilization 149.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 43: SH 288





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	601	115	275	901	93	74	148	209	133	332	115
Future Volume (vph)	53	601	115	275	901	93	74	148	209	133	332	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	220		150	120		150	80		80
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.976			0.986			0.912				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3490	0	1770	1699	0	1770	1863	1583
Flt Permitted	0.151			0.129			0.338			0.190		
Satd. Flow (perm)	281	3454	0	240	3490	0	630	1699	0	354	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			10			48				170
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3334			4203			1951			5273	
Travel Time (s)		75.8			95.5			44.3			119.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	58	653	125	299	979	101	80	161	227	145	361	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	778	0	299	1080	0	80	388	0	145	361	125
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												

Lanes, Volumes, Timings
44: Veterans Drive & Magnoila Parkway

09/16/2024

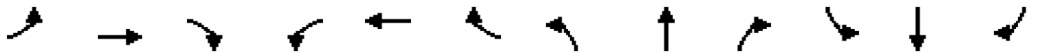
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	7.0		3.0	7.0		10.0	5.0		10.0	5.0	5.0
Minimum Split (s)	20.0	45.0		35.0	40.0		20.0	25.0		20.0	25.0	25.0
Total Split (s)	20.0	45.0		35.0	60.0		20.0	35.0		20.0	35.0	35.0
Total Split (%)	14.8%	33.3%		25.9%	44.4%		14.8%	25.9%		14.8%	25.9%	25.9%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max		None	None	None
Act Effct Green (s)	39.8	32.3		57.7	46.9		40.1	29.4		44.1	34.5	34.5
Actuated g/C Ratio	0.34	0.28		0.49	0.40		0.34	0.25		0.38	0.29	0.29
v/c Ratio	0.31	0.81		0.81	0.77		0.25	0.84		0.52	0.66	0.21
Control Delay (s/veh)	21.8	46.7		43.0	35.0		27.5	55.8		32.7	47.3	2.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	21.8	46.7		43.0	35.0		27.5	55.8		32.7	47.3	2.8
LOS	C	D		D	D		C	E		C	D	A
Approach Delay (s/veh)		45.0			36.7			51.0			35.2	
Approach LOS		D			D			D			D	
90th %ile Green (s)	9.4	39.0		29.0	58.6		12.8	29.0		14.0	30.2	30.2
90th %ile Term Code	Gap	Max		Max	Hold		Gap	MaxR		Max	Hold	Hold
70th %ile Green (s)	8.3	38.4		23.5	53.6		10.5	29.0		14.0	32.5	32.5
70th %ile Term Code	Gap	Gap		Gap	Hold		Gap	MaxR		Max	Hold	Hold
50th %ile Green (s)	7.6	33.4		19.0	44.8		10.0	29.0		12.0	31.0	31.0
50th %ile Term Code	Gap	Gap		Gap	Hold		Min	MaxR		Gap	Hold	Hold
30th %ile Green (s)	6.8	29.9		15.2	38.3		10.0	29.0		10.0	29.0	29.0
30th %ile Term Code	Gap	Hold		Gap	Gap		Min	MaxR		Min	Hold	Hold
10th %ile Green (s)	0.0	22.1		12.1	40.2		0.0	29.0		10.0	45.0	45.0
10th %ile Term Code	Skip	Gap		Gap	Hold		Skip	MaxR		Min	Hold	Hold

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 117.3
Natural Cycle: 125
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay (s/veh): 40.5 Intersection LOS: D
Intersection Capacity Utilization 84.4% ICU Level of Service E
Analysis Period (min) 15
90th %ile Actuated Cycle: 135
70th %ile Actuated Cycle: 128.9
50th %ile Actuated Cycle: 117.4
30th %ile Actuated Cycle: 108.1
10th %ile Actuated Cycle: 97.2

Splits and Phases: 44: Veterans Drive & Magnoila Parkway





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	4	172	1	1	1	99	275	1	4	466	30
Future Volume (vph)	40	4	172	1	1	1	99	275	1	4	466	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.892			0.955						0.992	
Flt Protected		0.991			0.984			0.987				
Satd. Flow (prot)	0	1647	0	0	1750	0	0	1839	0	0	1848	0
Flt Permitted		0.991			0.984			0.987				
Satd. Flow (perm)	0	1647	0	0	1750	0	0	1839	0	0	1848	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1272			1116			5316			5367	
Travel Time (s)		28.9			25.4			120.8			122.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	43	4	187	1	1	1	108	299	1	4	507	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	234	0	0	3	0	0	408	0	0	544	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

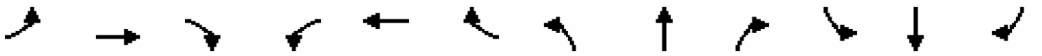
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	19.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	4	172	1	1	1	99	275	1	4	466	30
Future Vol, veh/h	40	4	172	1	1	1	99	275	1	4	466	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	4	187	1	1	1	108	299	1	4	507	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	12.5	10	17.2	25.2
HCM LOS	B	A	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	19%	33%	1%
Vol Thru, %	73%	2%	33%	93%
Vol Right, %	0%	80%	33%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	375	216	3	500
LT Vol	99	40	1	4
Through Vol	275	4	1	466
RT Vol	1	172	1	30
Lane Flow Rate	408	235	3	543
Geometry Grp	1	1	1	1
Degree of Util (X)	0.621	0.382	0.006	0.791
Departure Headway (Hd)	5.489	5.863	6.859	5.237
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	656	610	517	690
Service Time	3.54	3.924	4.959	3.282
HCM Lane V/C Ratio	0.622	0.385	0.006	0.787
HCM Control Delay, s/veh	17.2	12.5	10	25.2
HCM Lane LOS	C	B	A	D
HCM 95th-tile Q	4.3	1.8	0	7.9



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	15	12	118	16	112	15	188	108	169	335	41
Future Volume (vph)	19	15	12	118	16	112	15	188	108	169	335	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.965			0.938			0.953			0.990	
Flt Protected		0.979			0.977			0.998			0.985	
Satd. Flow (prot)	0	1760	0	0	1707	0	0	1772	0	0	1816	0
Flt Permitted		0.979			0.977			0.998			0.985	
Satd. Flow (perm)	0	1760	0	0	1707	0	0	1772	0	0	1816	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1459			1916			1299			5316	
Travel Time (s)		33.2			43.5			29.5			120.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	21	16	13	128	17	122	16	204	117	184	364	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	267	0	0	337	0	0	593	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	29.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	15	12	118	16	112	15	188	108	169	335	41
Future Vol, veh/h	19	15	12	118	16	112	15	188	108	169	335	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	16	13	128	17	122	16	204	117	184	364	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	11.2	15.3	15.8	44.9
HCM LOS	B	C	C	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	41%	48%	31%
Vol Thru, %	60%	33%	7%	61%
Vol Right, %	35%	26%	46%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	311	46	246	545
LT Vol	15	19	118	169
Through Vol	188	15	16	335
RT Vol	108	12	112	41
Lane Flow Rate	338	50	267	592
Geometry Grp	1	1	1	1
Degree of Util (X)	0.549	0.101	0.479	0.934
Departure Headway (Hd)	5.847	7.282	6.455	5.677
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	615	490	556	646
Service Time	3.893	5.356	4.505	3.677
HCM Lane V/C Ratio	0.55	0.102	0.48	0.916
HCM Control Delay, s/veh	15.8	11.2	15.3	44.9
HCM Lane LOS	C	B	C	E
HCM 95th-tile Q	3.3	0.3	2.6	12.5



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	395	224	518	266	77	269
Future Volume (vph)	395	224	518	266	77	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		120	0		150	150
Storage Lanes		1	0		0	0
Taper Length (ft)			0		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.946				0.895	
Flt Protected				0.968	0.989	
Satd. Flow (prot)	3348	0	0	3426	1649	0
Flt Permitted				0.968	0.989	
Satd. Flow (perm)	3348	0	0	3426	1649	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	601			563	5273	
Travel Time (s)	13.7			12.8	119.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	429	243	563	289	84	292
Shared Lane Traffic (%)						
Lane Group Flow (vph)	672	0	0	852	376	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

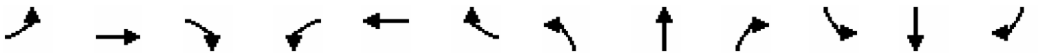
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.6%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	79.9
Intersection LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	395	224	518	266	77	269
Future Vol, veh/h	395	224	518	266	77	269
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	429	243	563	289	84	292
Number of Lanes	2	0	0	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	21.9	151	22.8
HCM LOS	C	F	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	22%	0%	0%	85%	0%
Vol Thru, %	0%	100%	37%	15%	100%
Vol Right, %	78%	0%	63%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	346	263	356	607	177
LT Vol	77	0	0	518	0
Through Vol	0	263	132	89	177
RT Vol	269	0	224	0	0
Lane Flow Rate	376	286	387	659	193
Geometry Grp	2	5	5	5	5
Degree of Util (X)	0.673	0.553	0.699	1.347	0.37
Departure Headway (Hd)	6.843	7.399	6.944	7.356	6.919
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	530	489	526	495	519
Service Time	4.843	5.099	4.644	5.114	4.676
HCM Lane V/C Ratio	0.709	0.585	0.736	1.331	0.372
HCM Control Delay, s/veh	22.8	18.9	24.2	191.1	13.7
HCM Lane LOS	C	C	C	F	B
HCM 95th-tile Q	5	3.3	5.4	29.4	1.7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	207	3	135	0	1	19	46	958	3	0	826	182
Future Volume (vph)	207	3	135	0	1	19	46	958	3	0	826	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	60		0	120		150	120		150	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.853			0.857						0.973	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1770	3019	0	1863	3033	0	1770	3539	0	1863	3444	0
Flt Permitted	0.741						0.163					
Satd. Flow (perm)	1380	3019	0	1863	3033	0	304	3539	0	1863	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		413			279						44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1082			1201			1142			806	
Travel Time (s)		24.6			27.3			26.0			18.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	225	3	147	0	1	21	50	1041	3	0	898	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	225	150	0	0	22	0	50	1044	0	0	1096	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		17			17			32			32	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												

Lanes, Volumes, Timings
48: Kirby Drive & North Spectrum Boulevard

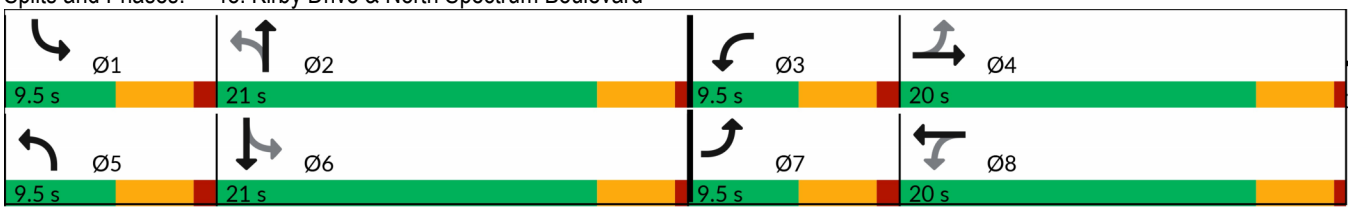
09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		9.5	20.0		9.5	21.0		9.5	21.0	
Total Split (%)	15.8%	33.3%		15.8%	33.3%		15.8%	35.0%		15.8%	35.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)	6.7	7.2			5.7		22.9	23.4			20.0	
Actuated g/C Ratio	0.17	0.19			0.15		0.59	0.60			0.51	
v/c Ratio	0.78	0.17			0.03		0.13	0.49			0.61	
Control Delay (s/veh)	36.7	0.4			0.1		5.1	5.8			11.8	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay (s/veh)	36.7	0.4			0.1		5.1	5.8			11.8	
LOS	D	A			A		A	A			B	
Approach Delay (s/veh)		22.2			0.1			5.8			11.8	
Approach LOS		C			A			A			B	
90th %ile Green (s)	5.0	15.0		0.0	5.5		5.0	26.5		0.0	17.0	
90th %ile Term Code	Max	Hold		Skip	Gap		Max	Hold		Skip	Max	
70th %ile Green (s)	5.0	5.5		0.0	0.0		5.0	26.5		0.0	17.0	
70th %ile Term Code	Max	Gap		Skip	Skip		Max	Hold		Skip	Max	
50th %ile Green (s)	5.0	5.5		0.0	0.0		0.0	17.0		0.0	17.0	
50th %ile Term Code	Max	Gap		Skip	Skip		Skip	MaxR		Skip	Max	
30th %ile Green (s)	5.0	5.5		0.0	0.0		0.0	17.0		0.0	17.0	
30th %ile Term Code	Max	Gap		Skip	Skip		Skip	MaxR		Skip	Max	
10th %ile Green (s)	5.0	5.5		0.0	0.0		0.0	30.5		0.0	30.5	
10th %ile Term Code	Max	Hold		Skip	Skip		Skip	Dwell		Skip	Dwell	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 38.9
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay (s/veh): 10.7 Intersection LOS: B
Intersection Capacity Utilization 61.4% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 49.5
70th %ile Actuated Cycle: 40
50th %ile Actuated Cycle: 30.5
30th %ile Actuated Cycle: 30.5
10th %ile Actuated Cycle: 44

Splits and Phases: 48: Kirby Drive & North Spectrum Boulevard





Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	78	52	3	912	47	47	912
Future Volume (vph)	78	52	3	912	47	47	912
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%
Storage Length (ft)	150	150	150		150	120	
Storage Lanes	0	0	1		0	1	
Taper Length (ft)	25		25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor							
Frt		0.850		0.993			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	1583	1770	3514	0	1770	3539
Flt Permitted	0.950		0.950			0.219	
Satd. Flow (perm)	1770	1583	1770	3514	0	408	3539
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		57		11			
Link Speed (mph)	30			30			30
Link Distance (ft)	1050			764			1142
Travel Time (s)	23.9			17.4			26.0
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0
Parking (#/hr)							
Mid-Block Traffic (%)	0%			0%			0%
Adj. Flow (vph)	85	57	3	991	51	51	991
Shared Lane Traffic (%)							
Lane Group Flow (vph)	85	57	3	1042	0	51	991
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	R NA	Left	Right	Left	Left
Median Width(ft)	12			12			12
Link Offset(ft)	0			0			0
Crosswalk Width(ft)	16			16			16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9		9	15	
Number of Detectors	1	1	1	2		1	2
Detector Template	Left	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0		0	0
Turn Type	Prot	Perm	Prot	NA		pm+pt	NA
Protected Phases	8		5	2		1	6
Permitted Phases		8				6	
Detector Phase	8	8	5	2		1	6
Switch Phase							

Lanes, Volumes, Timings
49: Kirby Drive & South Spectrum Boulevard

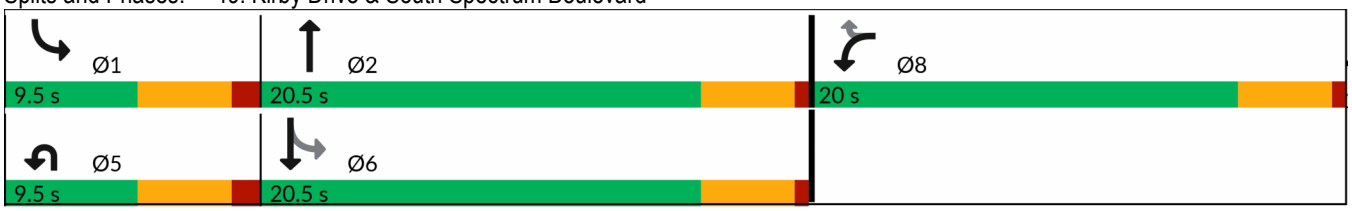
09/16/2024

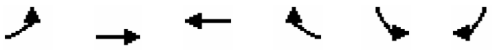
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	4.0	4.0	5.0	4.0		5.0	4.0
Minimum Split (s)	20.0	20.0	9.5	20.0		9.5	20.0
Total Split (s)	20.0	20.0	9.5	20.5		9.5	20.5
Total Split (%)	40.0%	40.0%	19.0%	41.0%		19.0%	41.0%
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	0.5	0.5	1.0	0.5		1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.0	4.0	4.5	4.0		4.5	4.0
Lead/Lag			Lead	Lag		Lead	Lag
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Recall Mode	None	None	None	Max		None	None
Act Effct Green (s)	7.3	7.3	5.0	25.8		26.2	27.5
Actuated g/C Ratio	0.19	0.19	0.13	0.67		0.68	0.71
v/c Ratio	0.25	0.17	0.01	0.44		0.11	0.39
Control Delay (s/veh)	15.9	6.6	17.0	8.6		4.2	6.3
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	15.9	6.6	17.0	8.6		4.2	6.3
LOS	B	A	B	A		A	A
Approach Delay (s/veh)	12.2			8.7			6.2
Approach LOS	B			A			A
90th %ile Green (s)	9.7	9.7	5.0	16.5		5.0	16.5
90th %ile Term Code	Gap	Gap	Max	MaxR		Max	Max
70th %ile Green (s)	8.2	8.2	0.0	16.5		5.0	26.0
70th %ile Term Code	Gap	Gap	Skip	MaxR		Max	Hold
50th %ile Green (s)	7.0	7.0	0.0	20.7		0.0	20.7
50th %ile Term Code	Gap	Gap	Skip	Dwell		Skip	Dwell
30th %ile Green (s)	0.0	0.0	0.0	31.5		0.0	31.5
30th %ile Term Code	Skip	Skip	Skip	Dwell		Skip	Dwell
10th %ile Green (s)	0.0	0.0	0.0	31.5		0.0	31.5
10th %ile Term Code	Skip	Skip	Skip	Dwell		Skip	Dwell

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 38.5
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay (s/veh): 7.7 Intersection LOS: A
Intersection Capacity Utilization 45.6% ICU Level of Service A
Analysis Period (min) 15
90th %ile Actuated Cycle: 43.7
70th %ile Actuated Cycle: 42.2
50th %ile Actuated Cycle: 35.7
30th %ile Actuated Cycle: 35.5
10th %ile Actuated Cycle: 35.5

Splits and Phases: 49: Kirby Drive & South Spectrum Boulevard



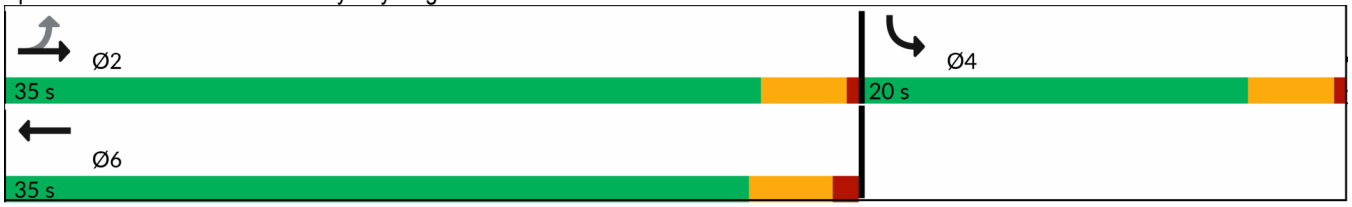


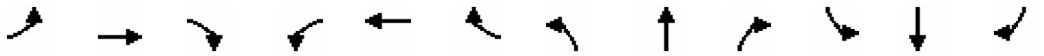
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	192	81	43	68	327	258
Future Volume (vph)	192	81	43	68	327	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	150	150
Storage Lanes	0			0	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.917		0.940	
Flt Protected		0.966			0.973	
Satd. Flow (prot)	0	1799	1708	0	1704	0
Flt Permitted		0.727			0.973	
Satd. Flow (perm)	0	1354	1708	0	1704	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			74		73	
Link Speed (mph)		30	30		30	
Link Distance (ft)		769	312		2088	
Travel Time (s)		17.5	7.1		47.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	209	88	47	74	355	280
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	297	121	0	635	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	
Detector Template	Left	Thru	Thru		Left	
Leading Detector (ft)	20	100	100		20	
Trailing Detector (ft)	0	0	0		0	
Turn Type	Perm	NA	NA		Prot	
Protected Phases		2	6		4	
Permitted Phases	2					
Detector Phase	2	2	6		4	
Switch Phase						

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	4.0	4.0	5.0		4.0	
Minimum Split (s)	20.0	20.0	22.5		20.0	
Total Split (s)	35.0	35.0	35.0		20.0	
Total Split (%)	63.6%	63.6%	63.6%		36.4%	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	1.0		0.5	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.0	4.5		4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max		None	
Act Effct Green (s)		31.0	30.5		16.0	
Actuated g/C Ratio		0.56	0.55		0.29	
v/c Ratio		0.39	0.12		1.16	
Control Delay (s/veh)		8.6	3.2		112.8	
Queue Delay		0.0	0.0		0.0	
Total Delay (s/veh)		8.6	3.2		112.8	
LOS		A	A		F	
Approach Delay (s/veh)		8.6	3.2		112.8	
Approach LOS		A	A		F	
90th %ile Green (s)	31.0	31.0	30.5		16.0	
90th %ile Term Code	Hold	Hold	MaxR		Max	
70th %ile Green (s)	31.0	31.0	30.5		16.0	
70th %ile Term Code	Hold	Hold	MaxR		Max	
50th %ile Green (s)	31.0	31.0	30.5		16.0	
50th %ile Term Code	Hold	Hold	MaxR		Max	
30th %ile Green (s)	31.0	31.0	30.5		16.0	
30th %ile Term Code	Hold	Hold	MaxR		Max	
10th %ile Green (s)	31.0	31.0	30.5		16.0	
10th %ile Term Code	Hold	Hold	MaxR		Max	

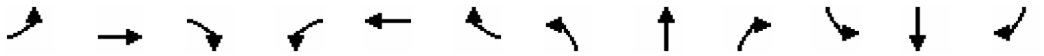
Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 55			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.16			
Intersection Signal Delay (s/veh): 70.8		Intersection LOS: E	
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 55			
70th %ile Actuated Cycle: 55			
50th %ile Actuated Cycle: 55			
30th %ile Actuated Cycle: 55			
10th %ile Actuated Cycle: 55			

Splits and Phases: 50: Discovery Bay/Hughes Ranch Road & SH 288





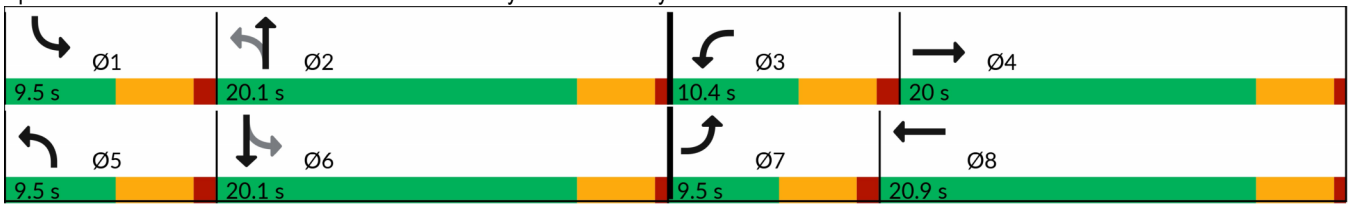
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	441	4	216	352	86	102	163	151	358	397	21
Future Volume (vph)	56	441	4	216	352	86	102	163	151	358	397	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	220		150	40		40	150		150
Storage Lanes	0		0	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.971			0.928			0.992	
Flt Protected		0.994		0.950			0.950			0.950		
Satd. Flow (prot)	0	3514	0	1770	3437	0	1770	3284	0	1770	1848	0
Flt Permitted		0.850		0.950			0.235			0.490		
Satd. Flow (perm)	0	3005	0	1770	3437	0	438	3284	0	913	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			49			164			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		215			3362			510			402	
Travel Time (s)		4.9			76.4			11.6			9.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	61	479	4	235	383	93	111	177	164	389	432	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	544	0	235	476	0	111	341	0	389	455	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0	4.0		5.0	4.0	
Minimum Split (s)	9.5	20.0		9.5	20.0		9.5	20.0		9.5	20.0	
Total Split (s)	9.5	20.0		10.4	20.9		9.5	20.1		9.5	20.1	
Total Split (%)	15.8%	33.3%		17.3%	34.8%		15.8%	33.5%		15.8%	33.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	0.5		1.0	0.5		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0		4.5	4.0		4.5	4.0		4.5	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	None	
Act Effct Green (s)		16.0		5.9	26.4		20.6	16.1		21.5	18.0	
Actuated g/C Ratio		0.27		0.10	0.44		0.34	0.27		0.36	0.30	
v/c Ratio		61.00dl		1.35	0.31		0.43	0.34		0.98	0.82	
Control Delay (s/veh)		345.6		218.9	10.4		16.4	10.1		62.0	36.3	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)		345.6		218.9	10.4		16.4	10.1		62.0	36.3	
LOS		F		F	B		B	B		E	D	
Approach Delay (s/veh)		345.6			79.3			11.6			48.2	
Approach LOS		F			E			B			D	
90th %ile Green (s)	0.0	16.0		5.9	26.4		5.0	16.1		5.0	16.1	
90th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Max	
70th %ile Green (s)	0.0	16.0		5.9	26.4		5.0	16.1		5.0	16.1	
70th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Max	
50th %ile Green (s)	0.0	16.0		5.9	26.4		5.0	16.1		5.0	16.1	
50th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Max	
30th %ile Green (s)	0.0	16.0		5.9	26.4		5.0	16.1		5.0	16.1	
30th %ile Term Code	Skip	Max		Max	Hold		Max	MaxR		Max	Max	
10th %ile Green (s)	0.0	16.0		5.9	26.4		0.0	16.1		5.0	25.6	
10th %ile Term Code	Skip	Max		Max	Hold		Skip	MaxR		Max	Hold	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.69			
Intersection Signal Delay (s/veh): 113.8		Intersection LOS: F	
Intersection Capacity Utilization 69.4%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 60			
70th %ile Actuated Cycle: 60			
50th %ile Actuated Cycle: 60			
30th %ile Actuated Cycle: 60			
10th %ile Actuated Cycle: 60			
dl Defacto Left Lane. Recode with 1 though lane as a left lane.			
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			

Splits and Phases: 51: Smith Ranch Road/Country Place Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	474	376	197	357	240	136
Future Volume (vph)	474	376	197	357	240	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	120		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.934					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3306	0	1770	3539	1770	1583
Flt Permitted			0.158		0.950	
Satd. Flow (perm)	3306	0	294	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	258					148
Link Speed (mph)	30			30	30	
Link Distance (ft)	3362			2489	974	
Travel Time (s)	76.4			56.6	22.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	515	409	214	388	261	148
Shared Lane Traffic (%)						
Lane Group Flow (vph)	924	0	214	388	261	148
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases			6			8
Detector Phase	2		1	6	8	8
Switch Phase						

Lanes, Volumes, Timings
52: Miller Ranch Road & Hughes Ranch Road

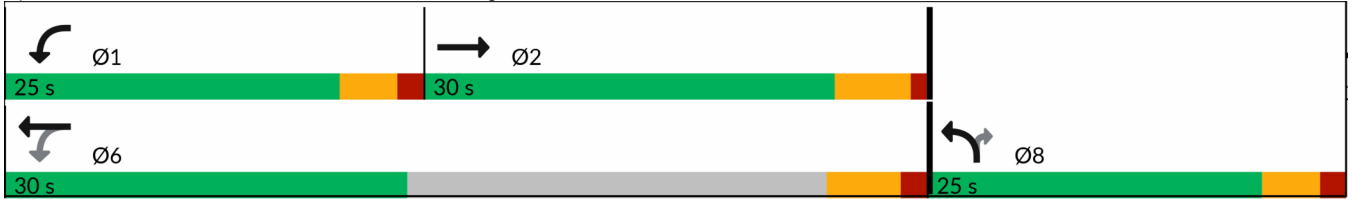
09/16/2024

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	11.0		4.0	11.0	5.0	5.0
Minimum Split (s)	25.0		20.0	25.0	21.0	21.0
Total Split (s)	30.0		25.0	30.0	25.0	25.0
Total Split (%)	37.5%		31.3%	37.5%	31.3%	31.3%
Yellow Time (s)	4.5		3.5	4.5	3.5	3.5
All-Red Time (s)	1.0		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	Max	Max
Act Effct Green (s)	20.8		36.3	35.3	20.2	20.2
Actuated g/C Ratio	0.31		0.55	0.53	0.30	0.30
v/c Ratio	0.76		0.56	0.21	0.49	0.25
Control Delay (s/veh)	19.5		14.5	8.2	24.4	5.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.5		14.5	8.2	24.4	5.5
LOS	B		B	A	C	A
Approach Delay (s/veh)	19.5			10.4	17.6	
Approach LOS	B			B	B	
90th %ile Green (s)	24.5		14.5	43.5	20.0	20.0
90th %ile Term Code	Max		Gap	Hold	MaxR	MaxR
70th %ile Green (s)	24.5		11.0	40.0	20.0	20.0
70th %ile Term Code	Max		Gap	Hold	MaxR	MaxR
50th %ile Green (s)	22.8		9.6	36.9	20.0	20.0
50th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
30th %ile Green (s)	18.9		8.5	31.9	20.0	20.0
30th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR
10th %ile Green (s)	14.3		7.0	25.8	20.0	20.0
10th %ile Term Code	Gap		Gap	Hold	MaxR	MaxR

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 66.6
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay (s/veh): 16.3 Intersection LOS: B
Intersection Capacity Utilization 62.3% ICU Level of Service B
Analysis Period (min) 15
90th %ile Actuated Cycle: 74.5
70th %ile Actuated Cycle: 71
50th %ile Actuated Cycle: 67.9
30th %ile Actuated Cycle: 62.9
10th %ile Actuated Cycle: 56.8

Splits and Phases: 52: Miller Ranch Road & Hughes Ranch Road





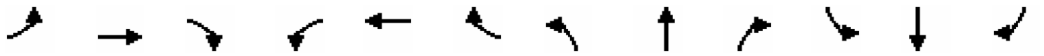
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	635	3	3	557	0	4
Future Volume (vph)	635	3	3	557	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	80		150	150
Storage Lanes		0	1		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.865	
Flt Protected			0.950			
Satd. Flow (prot)	3536	0	1770	3539	1611	0
Flt Permitted			0.341			
Satd. Flow (perm)	3536	0	635	3539	1611	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	1				305	
Link Speed (mph)	30			30	30	
Link Distance (ft)	2489			1502	641	
Travel Time (s)	56.6			34.1	14.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	690	3	3	605	0	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	693	0	3	605	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Detector Phase	2		1	6	8	
Switch Phase						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	4.0		5.0	4.0	4.0	
Minimum Split (s)	20.0		9.5	20.0	20.0	
Total Split (s)	20.5		9.5	30.0	20.0	
Total Split (%)	41.0%		19.0%	60.0%	40.0%	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		1.0	0.5	0.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.5	4.0	4.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max		None	None	None	
Act Effct Green (s)	36.0		33.3	37.4	5.7	
Actuated g/C Ratio	0.92		0.85	0.95	0.15	
v/c Ratio	0.21		0.00	0.18	0.01	
Control Delay (s/veh)	2.0		1.3	0.8	0.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay (s/veh)	2.0		1.3	0.8	0.0	
LOS	A		A	A	A	
Approach Delay (s/veh)	2.0			0.8		
Approach LOS	A			A		
90th %ile Green (s)	31.5		5.0	41.0	5.5	
90th %ile Term Code	Dwell		Max	Dwell	Gap	
70th %ile Green (s)	31.5		0.0	31.5	0.0	
70th %ile Term Code	Dwell		Skip	Dwell	Skip	
50th %ile Green (s)	31.5		0.0	31.5	0.0	
50th %ile Term Code	Dwell		Skip	Dwell	Skip	
30th %ile Green (s)	31.5		0.0	31.5	0.0	
30th %ile Term Code	Dwell		Skip	Dwell	Skip	
10th %ile Green (s)	31.5		0.0	31.5	0.0	
10th %ile Term Code	Dwell		Skip	Dwell	Skip	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 39.3			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.21			
Intersection Signal Delay (s/veh): 1.4		Intersection LOS: A	
Intersection Capacity Utilization 27.6%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 54.5			
70th %ile Actuated Cycle: 35.5			
50th %ile Actuated Cycle: 35.5			
30th %ile Actuated Cycle: 35.5			
10th %ile Actuated Cycle: 35.5			

Splits and Phases: 53: Bryan Court & Hughes Ranch Road





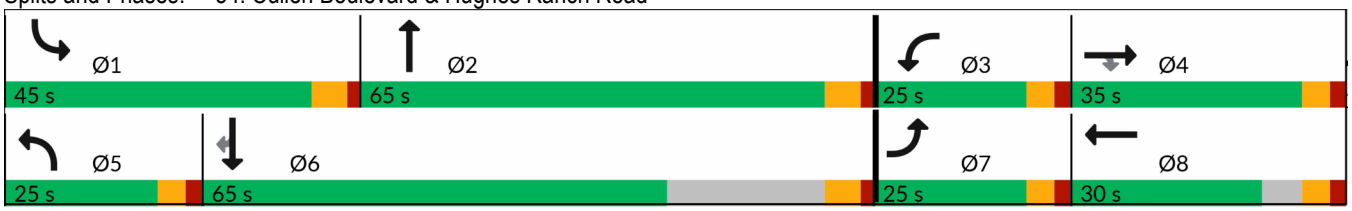
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	132	271	34	133	73	200	1041	53	71	1550	164
Future Volume (vph)	110	132	271	34	133	73	200	1041	53	71	1550	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		150	80		150	330		150	330		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.98											
Frt		0.944	0.850		0.947			0.993				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1671	1504	1770	1764	0	1770	3514	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1732	1671	1504	1770	1764	0	1770	3514	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15	209		14			3				87
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3319			5457			763			632	
Travel Time (s)		75.4			124.0			17.3			14.4	
Confl. Peds. (#/hr)	9											
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	120	143	295	37	145	79	217	1132	58	77	1685	178
Shared Lane Traffic (%)			29%									
Lane Group Flow (vph)	120	229	209	37	224	0	217	1190	0	77	1685	178
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												

Lanes, Volumes, Timings
54: Cullen Boulevard & Hughes Ranch Road 09/16/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	5.0	5.0	3.0	5.0		3.0	7.0		3.0	7.0	7.0
Minimum Split (s)	20.0	25.0	25.0	20.0	25.0		20.0	45.0		20.0	45.0	45.0
Total Split (s)	25.0	35.0	35.0	25.0	30.0		25.0	65.0		45.0	65.0	65.0
Total Split (%)	14.7%	20.6%	20.6%	14.7%	17.6%		14.7%	38.2%		26.5%	38.2%	38.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	4.5		4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	Max		None	None	None
Act Effct Green (s)	14.5	29.1	29.1	8.3	20.5		19.6	66.9		11.4	59.2	59.2
Actuated g/C Ratio	0.11	0.21	0.21	0.06	0.15		0.14	0.49		0.08	0.43	0.43
v/c Ratio	0.64	0.62	0.43	0.35	0.81		0.85	0.69		0.52	2.08	0.24
Control Delay (s/veh)	74.8	54.4	8.6	71.8	75.1		87.1	31.0		73.6	515.5	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	74.8	54.4	8.6	71.8	75.1		87.1	31.0		73.6	515.5	14.1
LOS	E	D	A	E	E		F	C		E	F	B
Approach Delay (s/veh)		41.6			74.6			39.7			452.0	
Approach LOS		D			E			D			F	
90th %ile Green (s)	19.5	32.7	32.7	11.3	24.5		19.5	62.2		15.8	59.0	59.0
90th %ile Term Code	Max	Hold	Hold	Gap	Max		Max	Hold		Gap	Max	Max
70th %ile Green (s)	17.0	31.9	31.9	9.6	24.5		19.5	64.7		13.3	59.0	59.0
70th %ile Term Code	Gap	Hold	Hold	Gap	Max		Max	Hold		Gap	Max	Max
50th %ile Green (s)	14.8	28.2	28.2	8.4	21.8		19.5	66.5		11.5	59.0	59.0
50th %ile Term Code	Gap	Hold	Hold	Gap	Gap		Max	Hold		Gap	Max	Max
30th %ile Green (s)	12.5	23.8	23.8	7.1	18.4		19.5	68.3		9.7	59.0	59.0
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap		Max	Hold		Gap	Max	Max
10th %ile Green (s)	9.3	28.8	28.8	0.0	14.0		19.5	70.8		7.2	59.0	59.0
10th %ile Term Code	Gap	Hold	Hold	Skip	Gap		Max	Hold		Gap	Max	Max

Intersection Summary			
Area Type:	Other		
Cycle Length: 170			
Actuated Cycle Length: 136.3			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.08			
Intersection Signal Delay (s/veh): 234.1		Intersection LOS: F	
Intersection Capacity Utilization 129.0%		ICU Level of Service H	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 145			
70th %ile Actuated Cycle: 142.5			
50th %ile Actuated Cycle: 137.6			
30th %ile Actuated Cycle: 131.9			
10th %ile Actuated Cycle: 124.3			

Splits and Phases: 54: Cullen Boulevard & Hughes Ranch Road





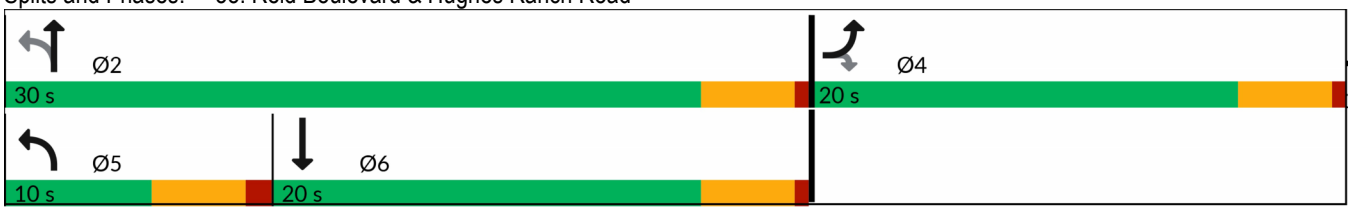
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	228	184	154	213	21
Future Volume (vph)	28	228	184	154	213	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	500	150	150			150
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor						
Frt		0.850			0.986	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3490	0
Flt Permitted	0.950		0.484			
Satd. Flow (perm)	1770	1583	902	3539	3490	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		248			22	
Link Speed (mph)	30			30	30	
Link Distance (ft)	5457			901	567	
Travel Time (s)	124.0			20.5	12.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	30	248	200	167	232	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	248	200	167	255	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1	1	1	2	2	
Detector Template	Left	Right	Left	Thru	Thru	
Leading Detector (ft)	20	20	20	100	100	
Trailing Detector (ft)	0	0	0	0	0	
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Detector Phase	4	4	5	2	6	
Switch Phase						

Lanes, Volumes, Timings
55: Reid Boulevard & Hughes Ranch Road 09/16/2024

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Minimum Initial (s)	4.0	4.0	5.0	4.0	4.0	
Minimum Split (s)	20.0	20.0	9.5	20.0	20.0	
Total Split (s)	20.0	20.0	10.0	30.0	20.0	
Total Split (%)	40.0%	40.0%	20.0%	60.0%	40.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	1.0	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.5	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	Max	None	
Act Effct Green (s)	7.2	7.2	27.8	28.3	19.9	
Actuated g/C Ratio	0.17	0.17	0.64	0.65	0.46	
v/c Ratio	0.10	0.53	0.29	0.07	0.16	
Control Delay (s/veh)	14.8	7.3	4.9	3.4	8.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	14.8	7.3	4.9	3.4	8.1	
LOS	B	A	A	A	A	
Approach Delay (s/veh)	8.1			4.2	8.1	
Approach LOS	A			A	A	
90th %ile Green (s)	10.8	10.8	5.5	26.0	16.0	
90th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
70th %ile Green (s)	7.5	7.5	5.5	26.0	16.0	
70th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
50th %ile Green (s)	6.1	6.1	5.5	26.0	16.0	
50th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
30th %ile Green (s)	5.6	5.6	5.5	26.0	16.0	
30th %ile Term Code	Gap	Gap	Max	MaxR	Hold	
10th %ile Green (s)	5.5	5.5	0.0	38.1	38.1	
10th %ile Term Code	Gap	Gap	Skip	Dwell	Dwell	

Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 43.5			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay (s/veh): 6.5		Intersection LOS: A	
Intersection Capacity Utilization 30.1%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 44.8			
70th %ile Actuated Cycle: 41.5			
50th %ile Actuated Cycle: 40.1			
30th %ile Actuated Cycle: 39.6			
10th %ile Actuated Cycle: 51.6			

Splits and Phases: 55: Reid Boulevard & Hughes Ranch Road





Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1569	97		395	
Travel Time (s)		35.7	2.2		9.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	0	0	-	0	1	0
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	-	0	1022	-
Stage 1	-	-	-	0	-	-
Stage 2	-	-	-	0	1022	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	-	-	-	1022	-
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	1022	-

Approach	SE	NW	SW
HCM Control Delay, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NWT	SEL	SETSWLn1	
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	-	0	-	0
HCM Lane LOS	-	A	-	A
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	33	0	0	3039	43
Future Volume (vph)	0	33	0	0	3039	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Ped Bike Factor						
Frt		0.865				0.850
Flt Protected						
Satd. Flow (prot)	0	1611	0	0	3539	1583
Flt Permitted						
Satd. Flow (perm)	0	1611	0	0	3539	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	216			500	772	
Travel Time (s)	4.9			11.4	17.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	36	0	0	3303	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	36	0	0	3303	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

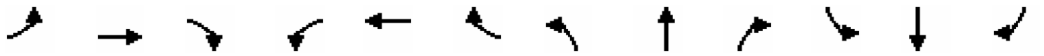
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	0	0	3039	43
Future Vol, veh/h	0	33	0	0	3039	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	-	-	-	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	36	0	0	3303	47

Major/Minor	Minor2			Major2	
Conflicting Flow All	-	1652		-	0
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	6.94		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	3.32		-	-
Pot Cap-1 Maneuver	0	87		-	0
Stage 1	0	-		-	0
Stage 2	0	-		-	0
Platoon blocked, %				-	
Mov Cap-1 Maneuver	-	87		-	-
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	SB
HCM Control Delay, s/v	72.19	0
HCM LOS	F	

Minor Lane/Major Mvmt	EBLn1	SBT
Capacity (veh/h)	87	-
HCM Lane V/C Ratio	0.41	-
HCM Control Delay (s/veh)	72.2	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	1.7	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Future Volume (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		150	100		150	100		150	100		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.925			0.925			0.925			0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3274	0	1770	3274	0	1770	1723	0	1770	1723	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3274	0	1770	3274	0	1770	1723	0	1770	1723	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		3590			2239			733			785	
Travel Time (s)		81.6			50.9			16.7			17.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	1	1	1	1	1	1	1	1	1	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	2	0	1	2	0	1	2	0	1	2	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

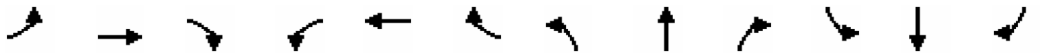
Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	1	1	1	1	1	1	1	1	1
Future Vol, veh/h	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1	1	1	1	1	1	1	1	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2	0	0	2	0	0	7	8	1	7	8	1
Stage 1	-	-	-	-	-	-	4	4	-	4	4	-
Stage 2	-	-	-	-	-	-	3	4	-	3	4	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1619	-	-	1619	-	-	1011	886	1083	1011	886	1083
Stage 1	-	-	-	-	-	-	1018	892	-	1018	892	-
Stage 2	-	-	-	-	-	-	1018	892	-	1018	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1619	-	-	1619	-	-	1008	885	1083	1008	885	1083
Mov Cap-2 Maneuver	-	-	-	-	-	-	1008	885	-	1008	885	-
Stage 1	-	-	-	-	-	-	1017	892	-	1017	892	-
Stage 2	-	-	-	-	-	-	1015	891	-	1015	891	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	2.41	2.41	8.66	8.66
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1008	974	1619	-	-	1619	-	-	1008	974
HCM Lane V/C Ratio	0.001	0.002	0.001	-	-	0.001	-	-	0.001	0.002
HCM Control Delay (s/veh)	8.6	8.7	7.2	-	-	7.2	-	-	8.6	8.7
HCM Lane LOS	A	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	0	-	-	0	-	-	0	0



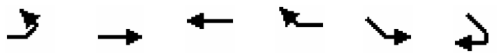
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	3539	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	3539	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2249			1944			317			367	
Travel Time (s)		51.1			44.2			7.2			8.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	150		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		0	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	3539	0	0	3539	0	0
Flt Permitted						
Satd. Flow (perm)	3539	0	0	3539	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1502			3319	640	
Travel Time (s)	34.1			75.4	14.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

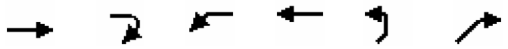


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			2	0	0
Taper Length (ft)	0				0	
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	0	3278	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	0	3278	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1127	502		1418	
Travel Time (s)		25.6	11.4		32.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

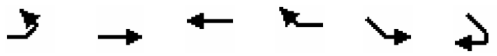
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	15	0	0	0	9
Future Volume (vph)	0	15	0	0	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	0	2
Taper Length (ft)	0				0	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	0.88
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	3539	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	0	3539	0	0	0	2787
Link Speed (mph)		30	30		30	
Link Distance (ft)		235	683		720	
Travel Time (s)		5.3	15.5		16.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	16	0	0	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	16	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		20	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		0	0		0	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	312			213	239	
Travel Time (s)	7.1			4.8	5.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	0	3539	1863	1863	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	1863	1863	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		213	215		156	
Travel Time (s)		4.8	4.9		3.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Appendix D: Travel Demand Modeling

Table of Contents

Travel Demand Modeling Memo **1**

Volume/Capacity Maps **5**

1 Introduction

As part of the Pearland Mobility Study, Kimley-Horn is conducting a holistic analysis of the City's transportation network to assess safety, connectivity, network efficiency, and integration of multimodal facilities. The study evaluates existing conditions, projected growth, and potential buildout scenarios to identify future mobility needs and recommend strategic improvements. The Mobility Plan resulting from this effort will include an action plan, a traffic management strategy, and updates to the Pearland Thoroughfare Plan, with prioritized project recommendations for short-term, intermediate, and long-term implementation.

To support this effort, Kimley-Horn requested HDR Engineering, Inc. (HDR) to prepare volume-to-capacity (V/C) ratio maps based on daily volumes and capacities for thoroughfares within the City of Pearland to analyze the impact of future land use, demographic, and socio-economic changes on the City's roadway network. These maps serve as a decision-making tool for identifying necessary lane additions or improvements. The analysis utilized the Travel Demand Model (TDM) provided by the Houston-Galveston Area Council (H-GAC) as the base network for thoroughfares.

2 Data Collection

The following datasets were obtained for the analysis:

- **2023 and 2045 TDM Networks**: Existing (2023) and proposed (2045) roadway network in GIS shapefile format, provided by H-GAC.
- **Traffic Analysis Zone (TAZ) Data**: Household population and employment data for 2023 and projections for 2045 in GIS shapefile format, provided by H-GAC, shown in Appendix A.
- **Pearland Comprehensive Plan Future Land Use Plan (FLUP)**[1]: Detailed land use designations for each TAZ guiding future development.
- **Census Bureau's Longitudinal Employer-Household Dynamics (LEHD)**[2]**:** Employment data used to analyze workforce distribution and job concentrations.

3 TDM Network Updates

Kimley-Horn requested HDR to update the proposed roadway network within the TDM, to align with the roadway conditions outlined in Pearland's Thoroughfare Plan[3]. The HDR Team coordinated with H-GAC to update the TDM network, to confirm that it better reflects the existing roadway network, including major roadways and their lane configurations. This update included all functional classifications except local roads, specifically major thoroughfares, secondary thoroughfares, and major and minor collectors. Roadway classifications were based on the Thoroughfare Plan, while the number of lanes was determined

[1] Pearland 2040 Comprehensive Plan - https://www.pearlandtx.gov/home/showpublisheddocument/35271/638711745703100000

[2] Census Bureau's Longitudinal Employer-Household Dynamics - https://lehd.ces.census.gov/

[3] Thoroughfare Plan | City of Pearland GIS - https://maps.pearlandtx.gov/documents/Pearland::thoroughfare-plan/explore

according to Section 6.3 Roadway Classifications of City of Pearland's Engineering Design Criteria Manual[4].

H-GAC initially provided population and employment data for each TAZ to HDR. After reviewing the dataset, HDR refined the population and employment estimates, as detailed in the following section, and provided the updated data to H-GAC. H-GAC staff assisted with the four-step modeling process within the TDM, incorporating the updated population and employment data for each TAZ and assigning traffic volumes to the network.

4 Adjustment of TAZ Data

HDR noted that the 2045 TAZ projections in the TDM for the City of Pearland varied from the anticipated growth outlined in the FLUP, with some areas showing higher projections and others lower. To address this discrepancy, the following steps were taken:

- Calculated the developable area within each TAZ by excluding already developed (as of 2023) and undevelopable features such as lakes, parks, and cemeteries. It was assumed that the remaining developable area would experience similar growth patterns as fully developed TAZs by 2045, in accordance with the FLUP.
- Applied suitable conversion factors to estimate the potential population and jobs that could occupy the developable areas as shown in Table 1.
    - The household population for single and multi-family per acre and household size was obtained from Pearland Comprehensive Plan. However, the factor for multi-family housing was adjusted from 33.08 to 20 based on the City of Pearland's current growth rate, as confirmed by the City's engineers. This adjustment reflects a more conservative estimate of household density in multi-family areas, aligned with the City's projections.
    - The employment factor was obtained from Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) dataset. A ratio of the number of jobs (obtained from LEHD) to the area of a fully developed TAZs were used as a factor to estimate the number of jobs within developable TAZs. The conversion factor was derived from several samples of fully developed TAZs and was adjusted to reflect a more realistic projection of job growth.
    - 70% of commercial land use was assumed to consist of parking and roads.

Table 1. TAZs Conversion Factors

Land Use Category	Conversion Factors	Units	Reference
Single-Family Residential	11.4	people per acre	Pearland Comprehensive Plan
Multi-Family Residential	33.08 (20)	people per acre	Pearland Comprehensive Plan (Adjusted to 20 based on Engineering Judgement)
Household Size	3	persons per household	Pearland Comprehensive Plan
Employment Commercial	21	jobs/acres	Longitudinal Employer-Household Dynamics
Employment Industrial	4	jobs/acres	Longitudinal Employer-Household Dynamics

[4] Pearland Engineering Design Criteria Manual - https://www.pearlandtx.gov/home/showpublisheddocument/34314/638392869767770000

- Combined the estimated household population and employment figures with the 2023 TAZ data to generate adjusted 2045 projections.
- Compared the adjusted 2045 numbers with the initial 2045 projections. If discrepancies between the adjusted and initial 2045 projections exceeded ±30%, the adjusted figures for household population and employment were used to replace the initial values for the respective TAZs as shown in Appendix B.
- Using the updated household population and employment data for 2045, H-GAC re-ran the four-step modeling process to assign the corresponding daily traffic volumes to the network.

5 Data Visualization and Discussion

H-GAC incorporated the adjusted TAZ data and the planned thoroughfare improvements into the TDM. This process allowed for a better assessment of how fully developed areas would impact the thoroughfares as outlined in Pearland's Thoroughfare Plan. The daily network volumes and capacity exported from the updated TDM were used to calculate the V/C ratio for each segment of the roadway in the network. The adjusted TDM and V/C ratio maps provide insights into areas with potential for development and their impact on existing thoroughfares, and thoroughfares requiring lane additions or improvements to accommodate the projected growth. The analysis provides a robust framework for decision-making, facilitating Pearland's thoroughfares to support future growth and development.

A series of V/C ratio maps were developed to analyze traffic patterns and congestion levels under different scenarios for the City of Pearland. These scenarios represent a progression of existing and future roadway network configurations, integrating demographic growth, land use changes, and proposed thoroughfare improvements. The analyzed scenarios include:

Existing Year 2023 Base H-GAC Conditions – Base 2023 model from H-GAC representing current roadway conditions and traffic volumes.

Year 2045 Base H-GAC Projections – H-GAC's future projections, including demographic and employment growth with the 2045 Base H-GAC roadway network.

Year 2045 Projections with FLUP – Adjusted TAZ employment and population data to reflect full development per the City of Pearland's FLUP in the Year 2045 Base H-GAC network.

Year 2045 Projections with FLUP and Thoroughfare Updates Scenario 1 – Incorporated additional thoroughfares from Pearland's Thoroughfare Plan that were not in the Year 2045 Projections with FLUP network.

Year 2045 Projections with FLUP and Thoroughfare Updates Scenario 2 – Expanded McHard Road and Dixie Farm Road from four to six lanes to assess the impact of increased roadway capacity.

These scenarios, along with their corresponding V/C ratio maps, are discussed further in the following sections.

Existing Year 2023 Base H-GAC Conditions: Figure 1 presents current traffic conditions based on the TDM calibrated to 2023 data. It highlights key problem areas under the existing infrastructure and travel demand, serving as a reference point for future comparisons. FM 518, Broadway Street and Mykawa Road experience severe congestion in 2023.

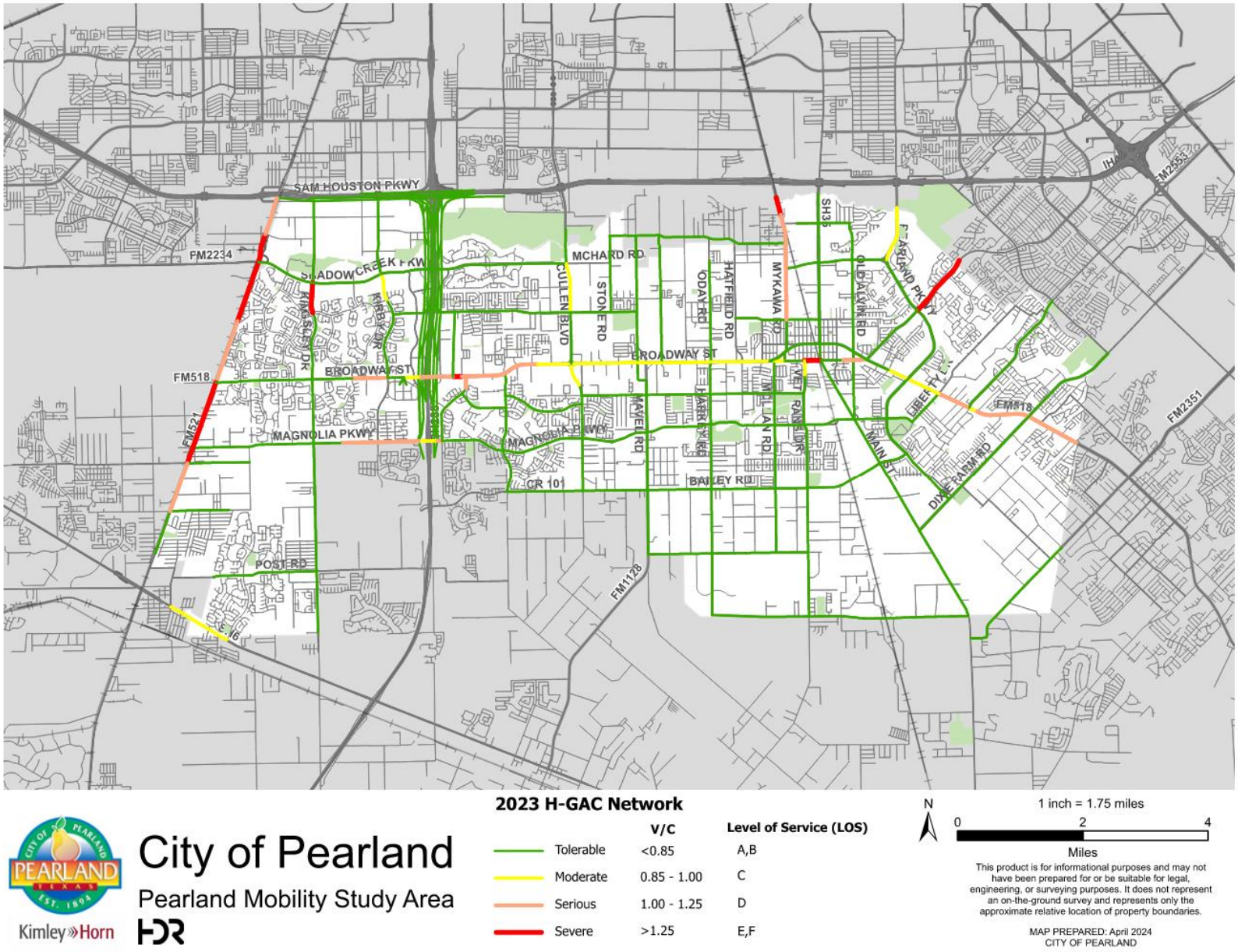


Figure 1. Pearland Mobility Study Area - Daily Volume-to-Capacity (V/C) Ratio – 2023 No Build

Year 2045 Base H-GAC Projections: According to the H-GAC 2045 network, new bottlenecks emerged along Magnolia Parkway, Veterans Drive, and several collector streets, predominantly in the southern areas of the City of Pearland. These bottlenecks reflect the pressures of future traffic growth on the infrastructure, as these areas, characterized by significant development potential in 2023, are expected to undergo further development by 2045. This increased development will lead to higher traffic volumes while the roadway network in most of the areas remains unchanged. In contrast, conditions on Broadway Street are expected to be improved in the 2045 model, as it is projected to expand from 4 lanes in 2023 to 6 lanes in 2045. This expansion is identified in the City of Pearland Capital Improvement Projects 2024-2028[5] and will provide additional capacity to accommodate future demand, as shown in Figure 2.

5 City of Pearland Capital Improvement Projects 2024-2028 - https://www.pearlandtx.gov/home/showdocument?id=32947&t=638337617793846007

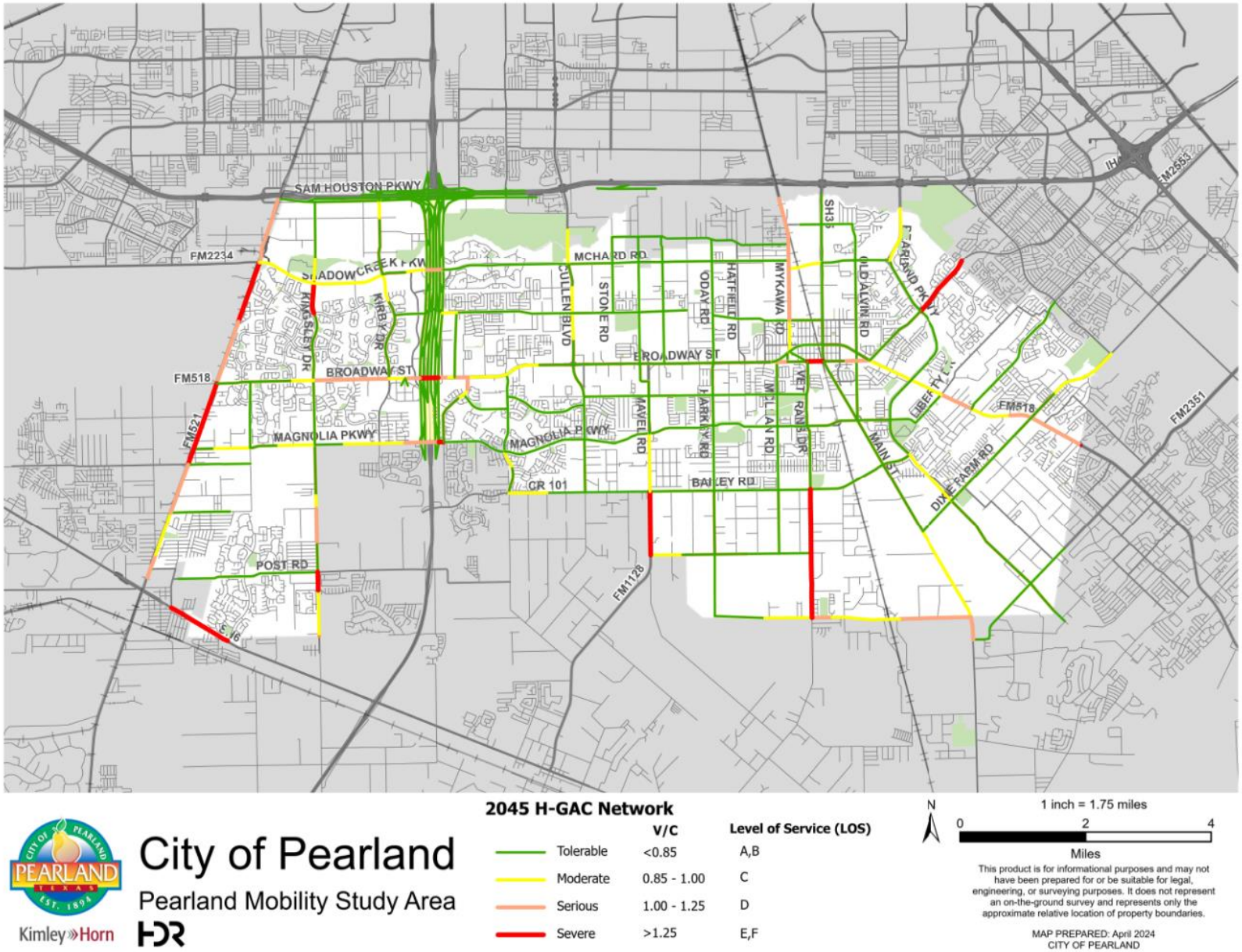


Figure 2. Pearland Mobility Study Area - Daily Volume-to-Capacity (V/C) Ratio – 2045 No Build

Year 2045 Projections with FLUP: This scenario incorporates the FLUP to evaluate the impact of projected development patterns on traffic conditions as shown in Figure 3. By assigning updated household population and employment figures to the TAZs, traffic volumes are redistributed across the roadway network, assuming full development as per the FLUP by 2045. While this redistribution balances traffic in some areas, it introduces congestion in previously uncongested corridors. Major roadways, such as FM 518, Magnolia Parkway, and Veterans Drive, remain severely congested. Additionally, new hotspots of congestion have emerged in areas experiencing intensified development under the FLUP, indicating the necessity for further roadway improvements or alternative transportation strategies to address future traffic demands.

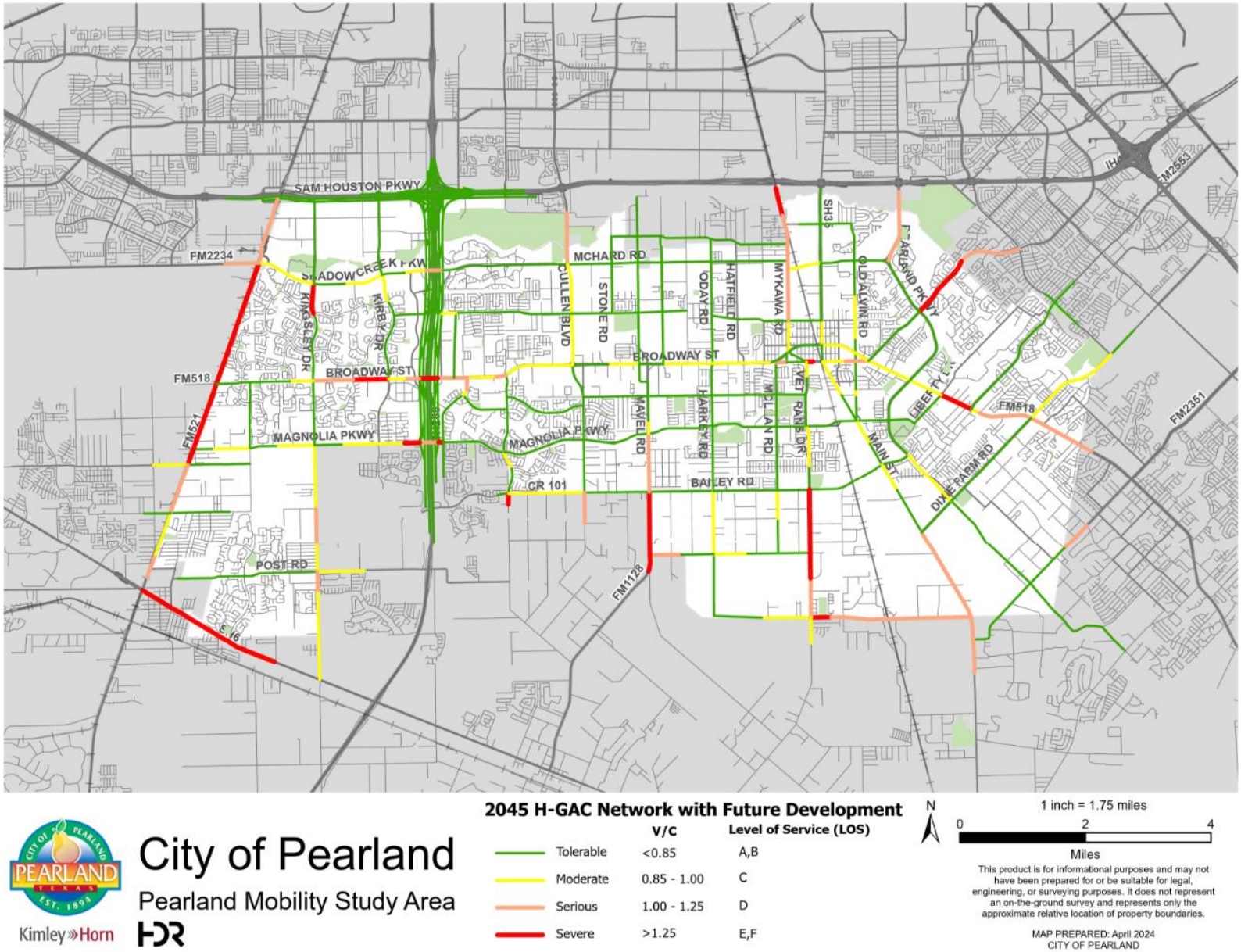


Figure 3. Pearland Mobility Study Area - Daily Volume-to-Capacity (V/C) Ratio – 2045 No Build with FLUP

Year 2045 Projections with FLUP and Thoroughfare Updates Scenario 1: This scenario, shown in Figure 4, integrates future developments (FLUP) with the planned roadway improvements outlined in the Pearland Thoroughfare Plan. The roadway network has been updated to reflect all possible thoroughfare enhancements expected by 2045, incorporating the City of Pearland's thoroughfare map. The analysis demonstrates the positive impact of these roadway upgrades on traffic flow and congestion levels. Key corridors, such as FM 518 and Broadway, show significant improvements, highlighting the benefits of the planned enhancements. However, some segments of FM 518 and Broadway, along with portions of Mykawa Road and Pearland Parkway, continue to experience moderate to severe congestion, indicating areas where future demand may still reach or exceed capacity despite the thoroughfare upgrades.

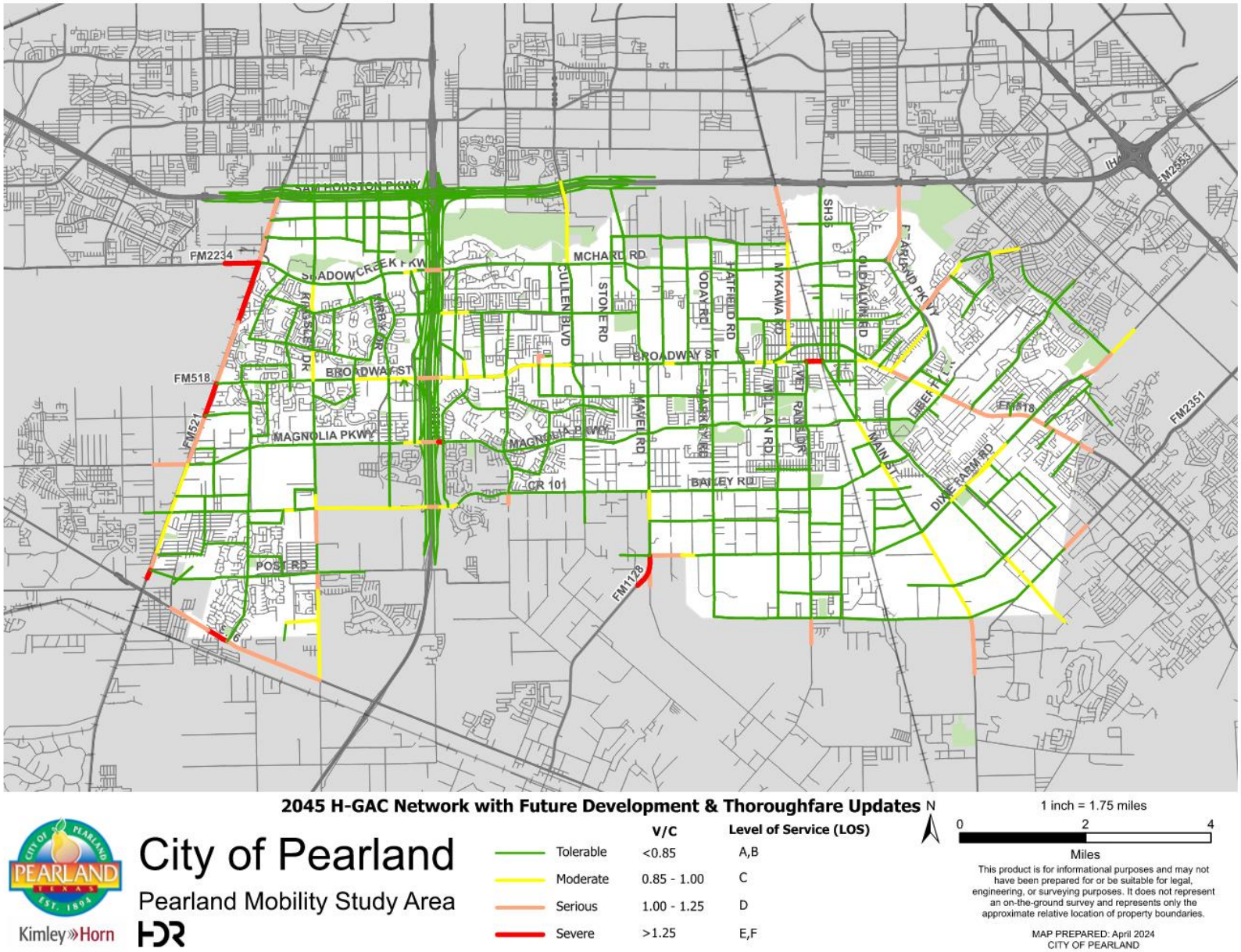


Figure 4. Pearland Mobility Study Area - Daily Volume-to-Capacity (V/C) Ratio – 2045 Build Scenario 1

Year 2045 Projections with FLUP and Thoroughfare Updates Scenario 2: This scenario evaluates the impact of expanding McHard Road and Dixie Farm Road to six lanes. Figure 5 shows that previously congested segments of Dixie Farm Road improve significantly, with traffic conditions transitioning to green, indicating reduced congestion. These capacity enhancements allow both corridors to serve as major relievers for east-west and north-south traffic.

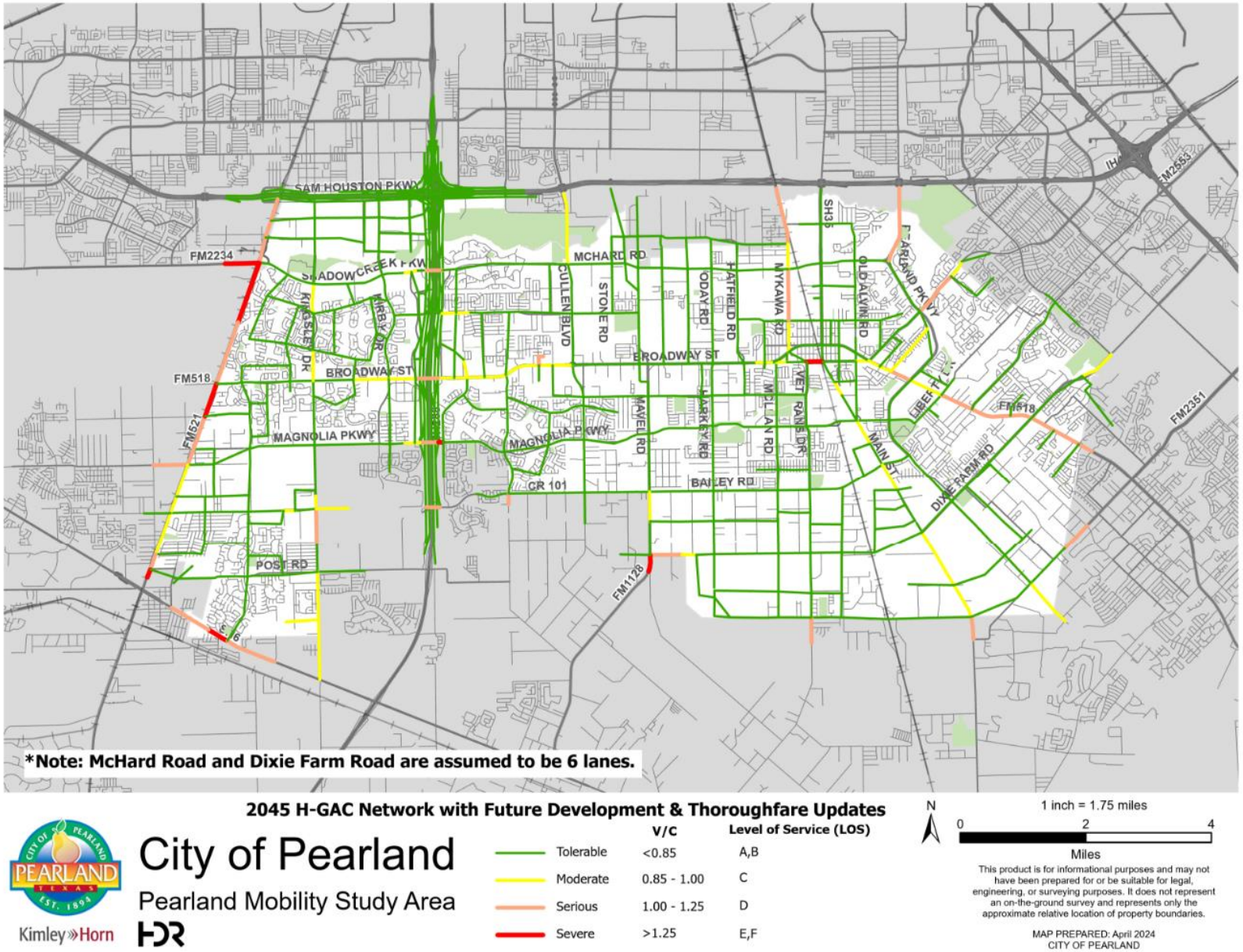


Figure 5. Pearland Mobility Study Area - Daily Volume-to-Capacity (V/C) Ratio – 2045 Build Scenario 2

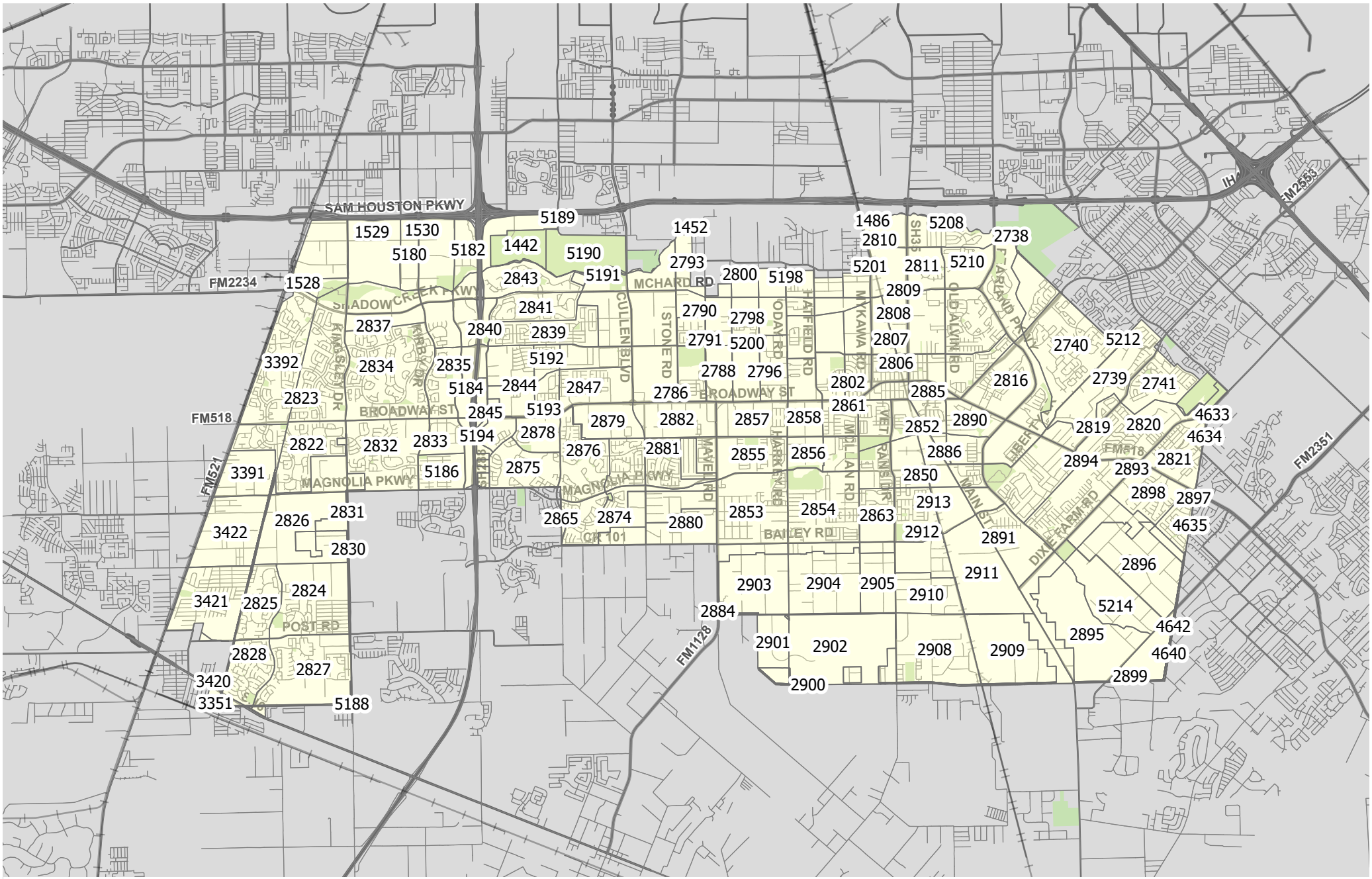
6 Conclusion

The analysis of five different scenarios provides a comprehensive understanding of how future growth and roadway improvements will impact traffic conditions in the City of Pearland. The initial two scenarios, based on H-GAC's existing and projected conditions, establish a baseline for comparison.

The 2023 base scenario highlights existing congestion hotspots, particularly along FM 518, Broadway Street, and Mykawa Road. The 2045 H-GAC projections indicate worsening congestion and the emergence of new bottlenecks due to increased development pressures. Incorporating the Future Land Use Plan (FLUP) refines demographic and employment assumptions, revealing further congestion in developing areas. The addition of planned thoroughfare improvements in Scenario 1 and Scenario 2 alleviates some congestion but leaves some corridors still operating at or near capacity. These findings emphasize the importance of planned roadway expansions and strategic investments to accommodate future growth and maintain mobility.

In the final Pearland Mobility Plan report, the Kimley-Horn team revised the Travel Demand Modeling (TDM) maps using the scenarios previously mentioned. This process utilized both afternoon peak hour and 24-hour data, along with updated GIS symbology colors according to the H-GAC project team's guidance. The data used to generate the final TDM maps remains consistent with the information referenced in this section.

Appendix A H-GAC Traffic Analysis Zones (TAZ) Map



City of Pearland

Pearland Mobility Study Area

City of Pearland Traffic Analysis Zoned (TAZ)

N

1 inch = 1.75 miles

0 2 4

Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: April 2024
CITY OF PEARLAND

Appendix B H-GAC 2045 TAZ Data Adjustment

TAZ ID	INITITAL H-GAC NUMBERS		FINAL NUMBERS	
	HP_2045	J_2045	HP_2045	J_2045
1442	4	289	3	471
1528	86	1370	237	1466
1529	6354	2615	0	1727
1530	2560	503	0	1175
2739	2113	255	2113	255
2740	5281	121	5281	121
2741	3612	275	3612	275
2786	99	701	473	862
2787	888	26	1252	138
2788	69	281	881	583
2789	248	62	3765	102
2790	872	10	1442	35
2791	289	51	1268	132
2792	703	2	1386	24
2793	100	84	128	229
2794	118	5	118	5
2795	341	28	341	28
2796	511	306	511	306
2797	906	16	906	16
2798	1153	36	1153	36
2799	46	0	46	0
2800	99	32	317	105
2802	1116	127	1116	127
2803	102	210	83	343
2804	756	10	1050	10
2806	962	447	962	447
2807	12	557	12	347
2808	3	550	5	734
2809	27	663	0	358
2810	36	531	36	531
2811	615	246	615	246
2812	989	1435	989	1435
2813	1044	91	1044	91
2814	420	663	420	663
2815	703	369	703	369
2816	2786	934	2912	1235
2817	1505	216	1505	216
2818	2664	222	2727	324
2819	485	112	485	112
2820	3086	567	3086	567
2821	2191	482	2191	482

ADJUSTED NUMBERS

2822	4148	48	4994	125
2823	8677	224	8677	224
2824	4172	120	6776	119
2825	2126	0	2126	0
2826	1232	1	3901	1
2827	11964	1593	9293	131
2828	2936	40	2766	60
2832	3929	301	3929	301
2833	425	2080	425	2080
2834	6786	504	6786	504
2835	3379	553	3379	553
2836	1016	253	886	373
2837	2507	281	2507	281
2838	0	847	0	847
2839	3886	158	3886	158
2840	0	148	0	148
2841	2184	147	2184	147
2842	300	2801	960	2685
2843	1319	232	1604	105
2844	378	1741	378	1741
2845	0	1271	0	1271
2846	902	897	2913	119
2847	1651	1295	1651	1295
2848	603	103	603	103
2849	507	262	507	262
2850	297	279	362	365
2851	4	156	10	297
2852	473	302	473	302
2853	1838	114	1838	114
2854	3401	257	3401	257
2855	1967	256	1967	256
2856	322	32	825	32
2857	1704	480	1704	480
2858	576	367	576	367
2859	1125	32	1220	108
2860	762	27	762	27
2861	1369	315	1369	315
2862	1504	89	1504	89
2863	1691	242	1691	242
2874	3240	135	4496	170
2875	1963	143	1963	143
2876	4374	854	4374	854
2877	272	1158	272	1158
2878	2637	455	2637	455

2879	236	114	995	634
2880	1311	2296	2261	298
2881	3754	88	3738	227
2882	2473	461	3108	727
2885	738	778	738	778
2886	25	266	25	266
2887	637	376	637	376
2888	445	65	773	133
2889	500	716	963	910
2890	2008	875	2008	875
2891	1148	678	1378	1250
2892	827	147	827	147
2893	3072	602	3072	602
2894	2418	756	2418	756
2895	202	142	204	2437
2896	1246	268	2673	268
2897	2046	97	2046	97
2898	2630	794	2630	794
2899	1986	325	1986	325
2901	4992	482	4992	482
2902	7542	12	11015	0
2903	449	232	2604	183
2904	1269	109	3474	109
2905	537	227	1631	167
2908	1620	62	3827	62
2909	108	162	136	2278
2910	1961	67	2659	444
2911	25	524	1034	1621
2912	1357	30	1357	30
2913	0	286	197	563
3391	1715	424	3617	485
3392	5285	63	5975	107
3421	3159	72	5165	72
3422	913	225	2530	225
5179	0	551	0	551
5180	2648	78	0	632
5181	8	2601	8	2601
5182	3230	1196	233	1161
5183	1529	358	1529	358
5184	0	1506	0	1506
5185	0	470	0	278
5186	1309	201	1388	317
5190	0	19	0	19
5191	0	0	0	0

5192	678	18	678	18
5193	604	443	604	443
5194	0	1542	0	1061
5198	129	150	313	303
5199	109	156	265	308
5200	99	293	316	551
5202	319	13	528	13
5203	303	154	720	154
5204	4	2	4	2
5205	12	105	15	291
5206	667	178	901	177
5207	248	331	772	391
5209	1449	105	1453	285
5210	670	26	669	455
5211	966	13	1892	13
5213	0	343	0	343
5214	485	67	812	466

Appendix E: High Injury Network and Countermeasures

Table of Contents

High Injury Network Memo **1**

Safety Recommendations **10**

Countermeasure Toolbox **13**

AUSTIN OFFICE
11701 Stonehollow Drive,
Suite 100
Austin, TX 78758
Phone: 512.821.2081
Fax: 512.821.2085
TBPE Firm Registration No. 812

MEMORANDUM

DATE: February 13, 2025
TO: Vivek Deshpande P.E.
CC:
FROM: ATG|DCCM
RE: High Injury Network Methodology

The purpose of this memorandum is to outline the methodology used to develop a High Injury Network (HIN) for Pearland, Texas. HINs are analytical tools that are developed to gain a better understanding of the locations severe and fatal crashes are occurring most often on road networks[1]. As Pearland creates its Mobility Plan and strives to improve traffic safety, the HIN is a useful tool to address traffic fatalities and serious injuries.

Introduction

HIN Components

1. **5 Years of crash data**: The HIN should typically use between 3 and 5 years of data. This provides a view of patterns rather than anecdotal events.
2. **Share of road network**: The HIN should represent a subset of the road network (typically 5 to 20% of road mileage and no more than 50 %).
   e.g.: <50% of street miles in Pearland accounted for 60% or more of severe and fatal pedestrian injuries.
3. **Level of analysis**: Corridors should be continuous, and individual corridors should have comparable crash patterns, design, and land use context.
4. **Collision density**: Corridors should capture a significant number of fatal and serious injury crashes (typically 40% or more).
5. **Roadway facility types**: The HIN should focus on roads on which the agency can implement changes.
6. **Equity**: The HIN should be conscious of disadvantaged communities.
7. **Consideration of modes**: The HIN should consider all transportation modes. [2]

---

[1] K. Ferrier, "HIN for the WIN," 8 March 2018. [Online]. Available: https://visionzeronetwork.org/hin-for-the-win/.
[2] Federal Highway Administration Office of Safety, "California's High Injury Network and Planning for Zero," September 2022. [Online]. Available: https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-10/California%20HIN_Case%20Study_Final%20Draft.pdf.

Methodology

Preparing the Crash Data

Automobile crash data in Texas is recorded by the incident's responding officer in a crash report. Texas Department of Transportation (TxDOT) requires certain information pertaining to the crashes to be included in these reports. Among these are the severity of the crash, listed from the highest severity of "fatal" to the lowest of "property damage only." For the development of the HIN, only crashes that resulted in a fatal or severe injury are included. This pinpoints the road segments that experience the highest severity crashes most frequently.

The data preparation process is as follows:

- Importing five years of crash data into GIS
- Associating the crashes with the nearest road segment
- Isolating severe and fatal crashes
- Weights are assigned to fatal and serious injury counts and attributed to their crash points. This process follows the guidance set forth in Chapter 6 of FHWA's Crash Costs for Highway Safety Analysis). [5] Table 1 displays the cost and weight breakdown for each level of severity. Weights are then calculated by dividing cost values by a factor of 10,436.

Table 1: Person-Injury Unit Costs and Weight

Severity	Economic Crash Unit Costs	Weight
K - Fatality	$1,565,406	150
A - Suspected Serious Injury	$118,172	11.3

- An "HIN Weight" field is created and calculated by multiplying the count of suspected serious injuries and fatalities by their corresponding weights.

Performing the Analysis

Texas roadway inventory data supplied by TxDOT for the year 2023 contains segmented road features with average daily traffic volumes and length of segments in miles. The average daily traffic volume represents the total two-way traffic on a roadway for some period less than a year, divided by the total number of days it represents, and includes both weekday and weekend traffic[3]. This is ideal for the analysis as the segmentation provides a more granular look at the transportation network for more localized crash patterns. To determine the HIN, crash features are joined to road segments. A

[3].https://onlinemanuals.txdot.gov/TxDOTOnlineManuals/TxDOTManuals/acm/definitions.htm#:~:text=ADT%3A%20The%20average%20daily%20traffic%20volume.%20It%20represents,represents%2C%20and%20includes%20both%20weekday%20and%20weekend%20traffic.

normalization procedure is required to account for the varying road segment lengths and average daily traffic. This is attained by creating an HIN rate, which is calculated using the equation below.

$$\text{Hin Rate} = \frac{\text{HIN weight}}{\text{Average Daily Traffic X Total Lane Miles}}$$

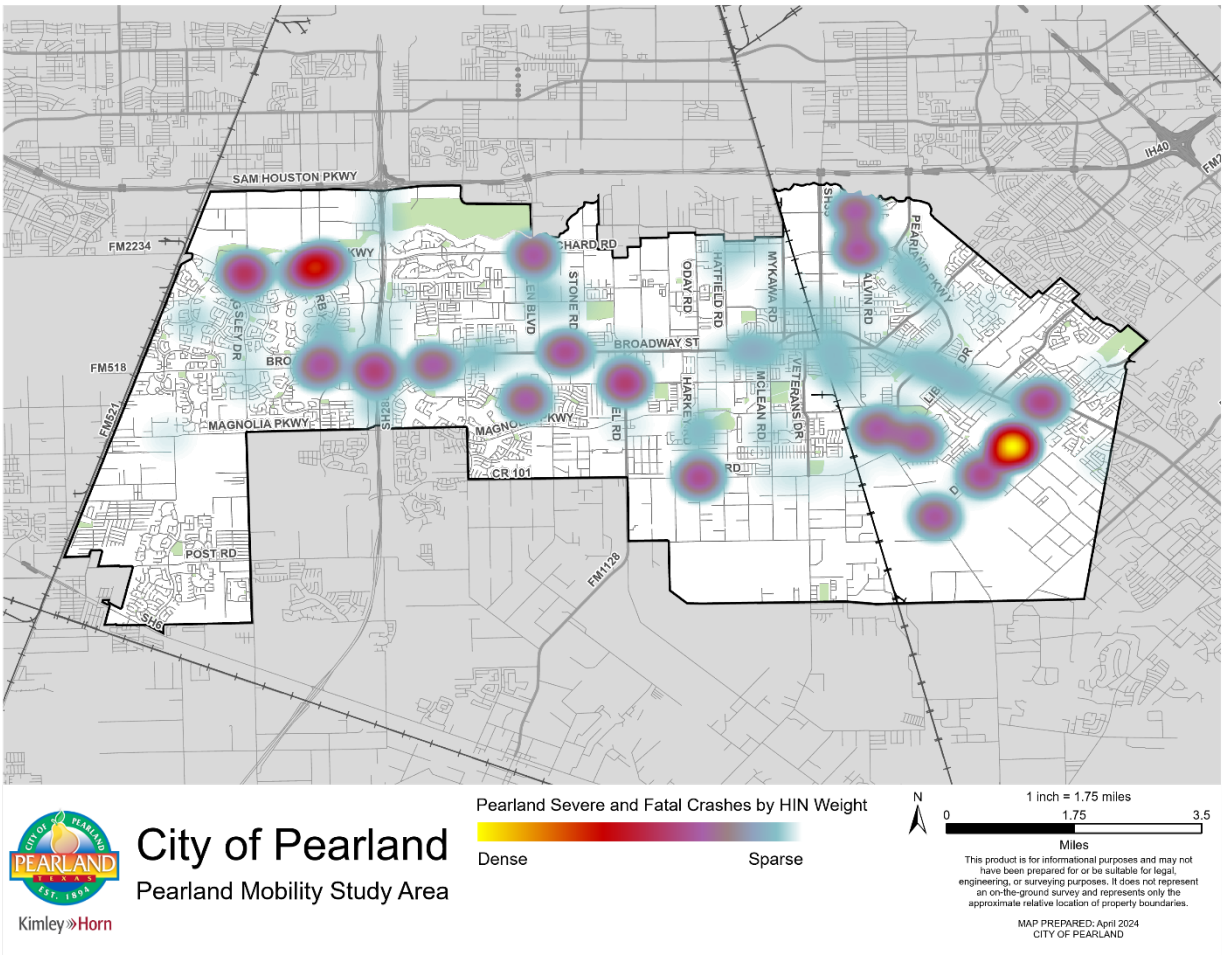
Road segments are listed in order by highest HIN rate. Segments are then selected for inclusion from the top until 60% of fatal and severe crash points are accounted for.

Results

Crashes by HIN Weight

Figure 1 below shows a heatmap representing all fatal and suspected injury crashes by their HIN Weight field. This normalization process accounts for different levels of crash severity and frequency while also considering the different roadway lengths and average daily traffic.

Figure 1: Pearland Severe and Fatal Crashes by HIN Weight



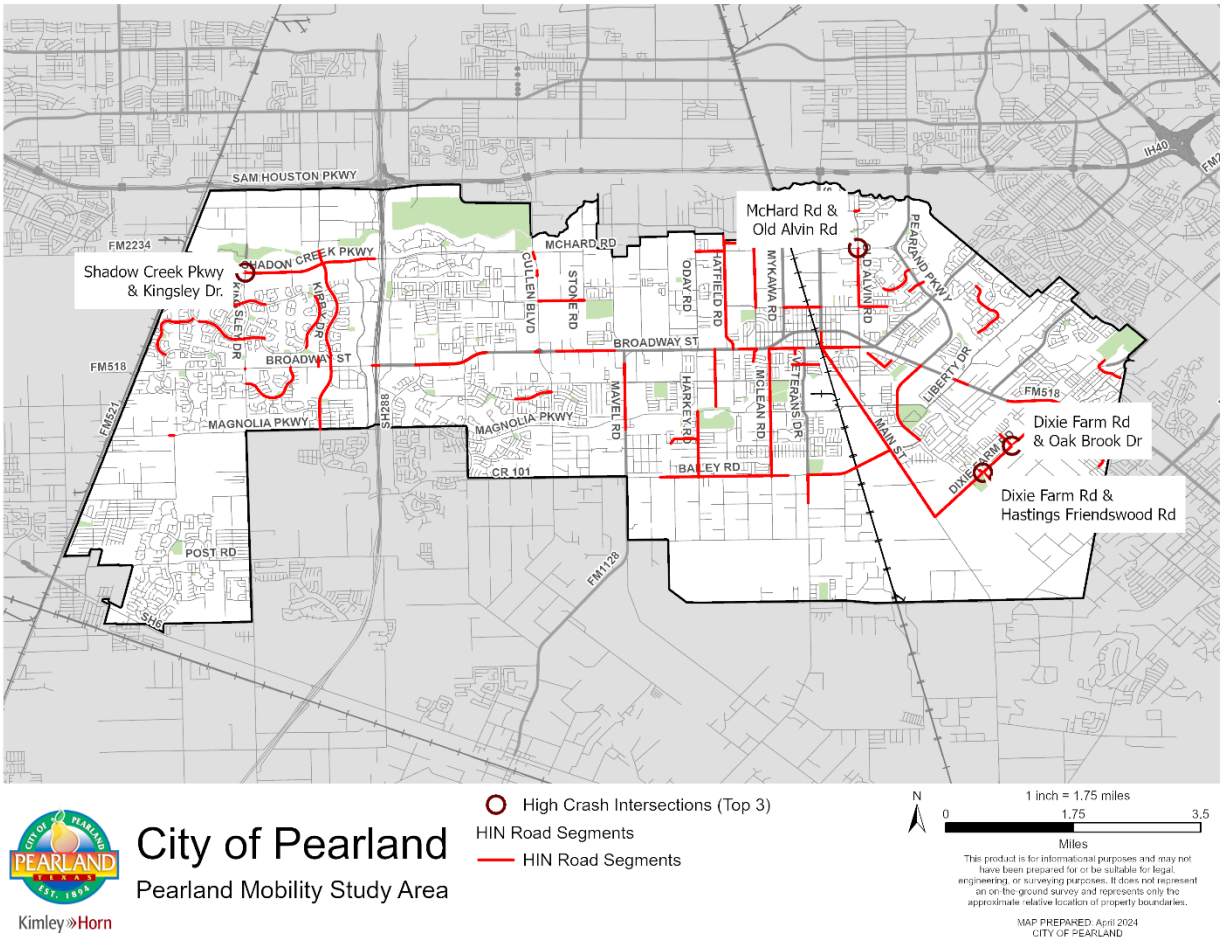
High Crash Intersections

Crashes were assigned to intersections using a fifty-foot buffer. Using the accumulated HIN Weight of the crashes within the buffer, intersections were ranked by weight resulting in the top three high crash intersections listed below in Table 2 and displayed in Figure 2. The three intersections listed are the only three that have at least one fatality and at least one serious injury.

Table 2: High Crash Intersections

Intersection	Fatal and Severe Crash Count	Person Fatal Count	Person Suspected Serious Injury Count	HIN Weight
Dixie Farm Rd & Oak Brook Dr	3	3	0	450
Shadow Creek Pkwy & Kingsley Dr.	5	1	4	206.5
Dixie Farm Rd & Hastings Friendswood Rd	3	1	2	172.6
McHard Rd & Old Alvin Rd	2	1	1	161.3

Figure 2: High Crash Intersections



HIN Segments

The resulting HIN displayed that 60% of fatal or severe crashes occurred on just under 5.7% of road segments in Pearland. Road segments included in the HIN and their crash information can be found on Figure 3 and in Table 2.

Certain segments that were not present in the HIN segment analysis were opted for inclusion given their adjacency to segments with high fatal and severe crash counts. Shadow Creek Parkway from 0.15 miles West of Reflection Bay to 0.1 miles West of SH 288. was included for its adjacency to another segment of Shadow Creek Parkway with a high HIN Rate. Dixie Farm Rd from Main Street to Pearland Parkway was included for its adjacency to segments on Main Street and Dixie Farm Rd with a high HIN Rate. Main Street from Bailey Rd to 0.35 miles Northwest of Dixie Farms Rd was included for its adjacency to segments of Main Street and Dixie Farms with high HIN Rates.

Figure 3: HIN Road Segments

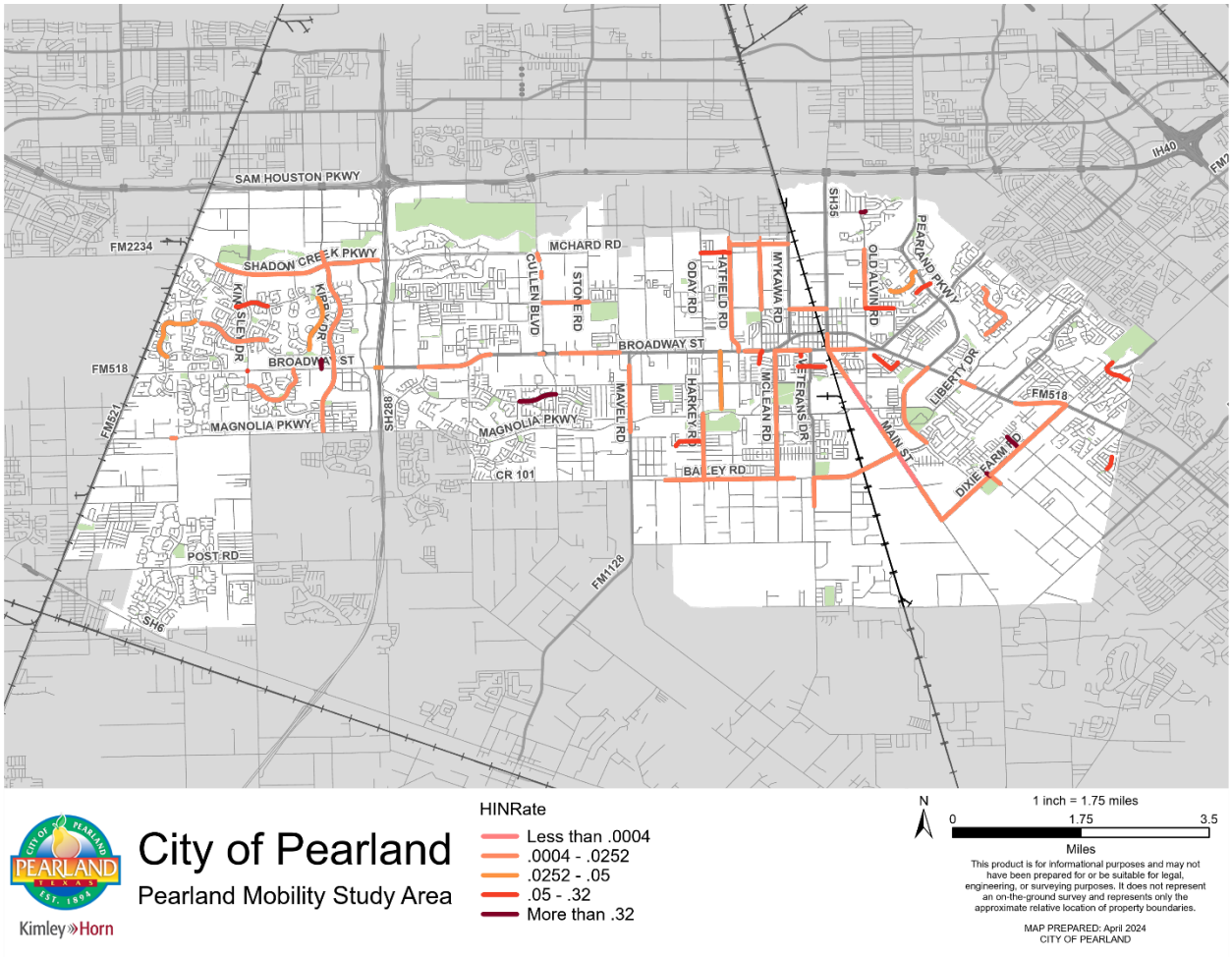


Table 3: HIN Segments

HIN ID	Roadway	Total Crash Count	Person Fatal Count	Person Severe Injury Count	HIN Weight	HIN Rate
1	TALLOAK DR	2	1	1	161.3	5.7335
2	KNAPP RD	1	1	0	150	4.8178
3	OAKBROOK DR	3	3	2	495.2	4.3970
4	BROADWAY BEND DR	1	1	0	150	2.3305
5	NORTHFORK DR	1	1	0	150	0.6307
6	WALNUT BEND BLVD	1	0	1	11.3	0.2552
7	CORRIGAN DR	1	0	2	22.6	0.2323
8	CHURCHILL	1	0	1	11.3	0.1909
9	DUNLAVY DR	1	0	1	11.3	0.1189
10	LARRYCREST	1	0	2	22.6	0.1172
11	REGENTS BAY DR	1	0	2	22.6	0.1070
12	STABLE STONE LN	1	0	1	11.3	0.1003
13	BRAZOS BEND DR	1	0	1	11.3	0.0665
14	E ORANGE ST	1	0	1	11.3	0.0636
15	COUNTY ROAD 9825	1	0	1	11.3	0.0624
16	RICE RD	1	0	1	11.3	0.0620
17	MCDONALD DR	1	0	1	11.3	0.0506
18	FOREST PARK LN	1	0	1	11.3	0.0441
19	ARCADIA BAY DR	1	0	2	22.6	0.0364
20	E CLEAR LAKE LOOP	1	0	1	11.3	0.0284
21	WAGON TRAIL RD	1	0	1	11.3	0.0274

22	BROADWAY ST	2	0	2	22.6	0.0256
23	HASTINGSFRIEND	1	0	1	11.3	0.0236
24	SOUTHERN TRAILS DR	1	0	1	11.3	0.0229
25	HIGHLAND MEADOWS DR	1	0	1	11.3	0.0223
26	WOODY RD	1	0	1	11.3	0.0216
27	BAILEY RD	1	0	1	11.3	0.0200
28	FM-865	1	1	0	150	0.0175
29	OLD ALVIN RD	2	1	1	161.3	0.0169
30	SH-35	2	1	1	161.3	0.0156
31	SH-35	1	1	0	150	0.0139
32	SCOTT LN	1	0	2	22.6	0.0137
33	FM-518	1	0	1	11.3	0.0120
34	FM-1128	4	1	5	206.5	0.0108
35	HARKEY	1	0	6	67.8	0.0095
36	FM-2234	2	0	2	22.6	0.0089
37	DIXIE FARM	3	1	2	172.6	0.0086
38	DALLAS	1	0	1	11.3	0.0083
39	W ORANGE	1	0	4	45.2	0.0075
40	FM-865	1	0	2	22.6	0.0064
41	N HATFIELD	2	0	4	45.2	0.0058
42	SH-35	2	1	1	161.3	0.0054
43	BAILEY	3	1	3	183.9	0.0042
44	HUGHES RANCH RD	2	0	2	22.6	0.0035
45	DIXIE FARM	2	0	3	33.9	0.0031
46	KIRBY RD	6	1	9	251.7	0.0029
47	FM-2234	1	1	0	150	0.0028

48	FM-518	4	1	4	195.2	0.0027
49	PEARLAND SITES RD	1	0	1	11.3	0.0026
50	FM-518	1	0	3	33.9	0.0026
51	E WALNUT	2	0	2	22.6	0.0024
52	SH-35	2	0	2	22.6	0.0024
53	FM-518	2	0	2	22.6	0.0024
54	FM-2234	4	0	5	56.5	0.0023
55	FM-518	5	1	4	195.2	0.0022
56	CHESSER MCLEAN	2	0	3	33.9	0.0022
57	W WALNUT	1	0	1	11.3	0.0020
58	CHESSER MCLEAN	2	0	1	11.3	0.0019
59	FM-518	2	0	2	22.6	0.0018
60	FM-518	1	0	1	11.3	0.0016
61	PEARLAND PKWY	2	1	1	161.3	0.0016
62	FM-2234	8	1	7	229.1	0.0015
63	TRINITY BAY DR	1	0	1	11.3	0.0015
64	FM-518	3	0	3	33.9	0.0014
65	FM-518	4	1	3	183.9	0.0014
66	SH-35	2	0	2	22.6	0.0009
67	SH-35	1	0	1	11.3	0.0007
68	SH-35	1	0	1	11.3	0.0006
69	DIXIE FARM	1	0	3	33.9	0.0005
70	SH-35	2	0	2	22.6	0.0004
71	SH-35	1	0	1	11.3	0.0003

Safety Countermeasures

Safety countermeasures were selected to align potential countermeasures to the specific problems identified at each selected location. Locations were selected based on a combination of HIN results, review of the crash characteristics, and professional engineering judgement. This eliminated some locations on the HIN where a short segment over-emphasizes a lower number of crashes (relatively), in favor of locations where improvements can make the greatest impact to the most drivers.

Table 4: Intersections

Intersection Name	Crash History	Potential Countermeasure
Shadow Creek Pkwy & Kingsley Dr.	• Crash #15915534 (fatal) and #18049272 (fatal) occurred when drivers disregarded traffic signals. Both happened in daylight, with one involving speeding. • Crashes #16408411, #17208733, and #18795265 (all severe (A) injuries) happened when drivers turning left failed to yield to oncoming traffic. One occurred at night, and two involved speeding. • Crash #16408411 (utility pole) and #18049272 (traffic signal pole) suggest drivers lost control during sudden maneuvers or misjudged turns. The proximity of utility poles to the road increases the risk of collisions if vehicles lose control.	• Change Left-Turn Movement from Permitted-Protected to Protected on Major Approach (CMF ID = 340)
Dixie Farm Rd & Oakbrook Drive	• Crash #15915534 (fatal) occurred when a driver ran a red light while speeding in daylight, causing an angle collision. • Crash #17400437 (fatal) occurred when a driver turned right on a red light without yielding to oncoming traffic, leading to an angle crash. • Crash #16016859 (severe(A) injury) occurred when a driver was speeding, leading to a rear-end collision. • All crashes occurred in daylight under cloudy conditions, suggesting drivers may misjudge distances or fail to notice signals.	• Install Advanced Warning Signals (124)

Dixie Farm Rd & Hastings Friendswood Rd	• Crash #19869570 (fatal) occurred during daylight under clear weather conditions. • Crash #15763588 (severe(A) injury) resulted from a stop sign violation leading to a fixed-object crash. • Crash #19649397 (severe(A) injury) caused by an unsafe lane change resulting in a rear-end crash.	• Install Traffic Signalization - Currently underway by City
McHard Rd & Old Alvin Rd	• Crash #17492967 (fatal) occurred when a driver disregarded a signal during cloudy daylight, causing an angle collision. • Crash #17452121 (severe (A) Injury) occurred at night under lighted but cloudy conditions when a driver ignored a signal and collided with an object. • One bicyclist related collision	• Install Advanced Warning Signals (124)

Additional countermeasures to be considered for all intersections are installation of intersection safety lighting, revitalization of pavement markings (including crosswalks), installation of retroreflective backplates, and signal timing modifications (clearance intervals).

Table 4: Segments

Segment	Crash History	Potential Countermeasure
Kirby Road from Shadow Creek Pkwy to Magnolia Pkwy	• One fatal collision (#17220616) occurred when a vehicle departed its lane and hit a roadside pole. • Five severe (A) collisions involved drivers failing to yield during left turns or while entering/exiting driveways, leading to angle collisions with oncoming traffic, or drivers swerving to avoid pedestrians and hitting trees/poles. • Two bicyclist related collision • Two fixed object collisions	• Install Warning/Guide Signs on Minor Approach (101) • Keep Vegetation Trimmed • Install Pavement Markings (401) (Shared Bike Lane Markings)
FM 2234 from SH 288 to Reflection Bay Drive	• One fatal collision (#17472722) involved a pedestrian who failed to yield the right of way to a vehicle. A pedestrian struck in dark, unlighted conditions.	• Improve/Install Sidewalks (407) • Improve Pedestrian Signals (131) • Install Pedestrian Signal (110) (at missing locations)

	• Seven severe (A) collisions: Involved drivers failing to yield during left turns or while entering/exiting driveways, leading to angle collisions with oncoming traffic, or drivers swerving into poles. • Two pedestrian related collisions	• Lighting Improvements (304)

Safety Countermeasure Toolbox

This toolbox highlights a selection of Proven Safety Countermeasures from the Federal Highway Administration (FHWA). The collection of proven countermeasures, or strategies, are effective in reducing roadway fatalities and serious injuries.[1] Implementation of these countermeasures supports the Safe Systems Approach goal of preventing crashes and minimizing harm when crashes occur. Where available, each countermeasure includes the associated Crash Reduction Factor (CRF), representing the expected decrease in crashes as a percentage if the countermeasure is put in place.[2] Cities and communities should select safety countermeasures based on local transportation needs, safety concerns, infrastructure context, and funding availability. Relevant TxDOT work codes from the 2025 Highway Safety Improvement Program (HSIP) Guidelines are also listed where available.[2]

Appropriate Speed Limits

Speed Management



Setting appropriate speed limits is one of the most effective strategies for reducing fatalities and serious injuries.

Speed limits should consider a range of factors, such as land use, traffic, road geometry, and pedestrian and cyclist activity. If a pedestrian is struck by a vehicle, their chance of serious injury or death drops drastically when vehicles are traveling at lower speeds.

One way of reducing speeds is by establishing reduced speed zones in areas where there is a high amount of pedestrian activity. There are other key activities and factors to consider such as road design, visibility, and land use when designating areas for reduced speed zones.

Dedicated Turn Lanes at Intersections

Intersections



Dedicated turn lanes can provide separation between turning traffic that is slowing or stopped and through traffic. Left and right turn lanes create a space that holds vehicles waiting to turn and is a space for deceleration prior to turning. In addition, turn lanes can add operational improvements that reduce traffic delays.

Turn lanes should be considered for intersection locations where there is a significant volume of turning vehicles, or where there is a history of turn-related crashes.

Crash Reduction Factors
Installation of Left Turn lane: 25%
Installation of Right turn lane: 35%

TxDOT HSIP Work Codes: 509, 519, 520, 521, 522, 526

Corridor Access Management

Intersections



Corridor access management involves controlling the amount of entry and exit points along a roadway, including driveways and other roadway. This strategy reduces the number of conflict points between roadway users of all types. Examples include: raised medians, reducing driveway density, adjusting intersection spacing, providing turn lanes, and utilizing roundabouts.

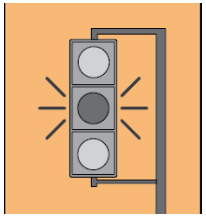
Corridor access management strategies can be implemented alone or in combination with one another. Effective strategies take into account the flow of traffic, locations of conflict points, and land use while maintaining mobility for all modes of transportation.

TxDOT HSIP Work Codes: 201, 203, 509, 516, 519, 518, 519, 520, 521, 522, 526, 547

1 *https://highways.dot.gov/safety/proven-safety-countermeasures*
2 *https://www.txdot.gov/content/dam/docs/trf/highway-safety-engineering/hsip-guidance-program.pdf*

Yellow Change Intervals

Intersections



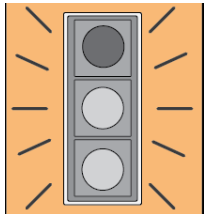
A yellow change interval is the length of time that a signalized intersection displays a yellow signal. An appropriate interval reduces crashes by decreasing red-light runners, which is one of the leading causes of severe crashes. The appropriate time can be influenced by road geometry and speed limits. Signal timings should be regularly evaluated and adjusted, ideally through automated measures (ATSPMs).

Crash Reduction Factor: 27%

TxDOT HSIP Work Code: 108, 138

Backplates with Retroreflective Borders

Intersections



Adding backplates with retroreflective borders to traffic signals can improve the visibility of traffic signals to drivers in both daytime and nighttime conditions. Backplates can also alert drivers of an intersection if a power outage causes a signal to go dark. This is a low cost treatment that involves installing reflective tape or replacing backplates. In addition, retroreflective borders can be set as the standard for intersection signals.

Crash Reduction Factor: 24%

TxDOT HSIP Work Code: 108

Crosswalk Visibility Enhancements

Pedestrians/Cyclists



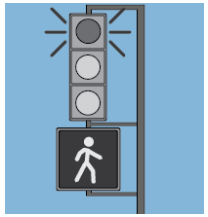
The main crosswalk enhancements are high visibility crosswalk patterns, additional lighting, and enhanced signage and pavement markings. These make pedestrians visible to drivers and help show people where to cross the road. Enhancements are most appropriate for crossings of multi-lane roadways with greater than 10,000 Average Annual Daily Traffic (AADT).

Crash Reduction Factor: 44%

TxDOT HSIP Work Codes: 108, 131, 304, 403

Leading Pedestrian Interval

Pedestrians/Cyclists



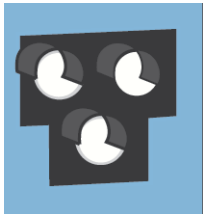
Leading pedestrian intervals allow pedestrians to enter an intersection 3-7 seconds before vehicles are given a green light. This gives pedestrians the opportunity to establish their presence in the intersection, gives individuals more time to cross the road, and increases the likelihood that vehicles yield to pedestrians.

Crash Reduction Factor: 16%

TxDOT HSIP Work Code: 109

Pedestrian Hybrid Beacons (PHB)

Pedestrians/Cyclists



Pedestrian hybrid beacons are traffic control devices used at midblock crossings and uncontrolled intersections to help pedestrians safely cross higher-speed roads. Pedestrians activate the PHB that signals for drivers to slow, come to a stop while people are crossing, and then proceed.

Crash Reduction Factor: 15%

TxDOT HSIP Work Code: 143

Rectangular Rapid Flashing Beacons (RRFB)

Pedestrians/Cyclists



RRFBs are LED lights used on pedestrian warning signs to alert drivers of pedestrians entering a crosswalk. RRFBs can greatly increase the yielding rate of vehicles, and can be activated manually or by remote pedestrian detection. RRFBs are beneficial to include with trail and school crossing warning signs.

TxDOT HSIP Work Code: 144

Walkways

Pedestrians/Cyclists



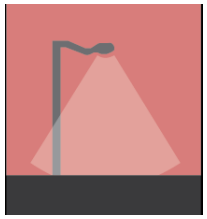
Walkways are designated spaces for pedestrians to travel along roadways. These include sidewalks, shared use paths, or walkable roadway shoulders. Walkway types depend on roadway context (rural, suburban, or urban) and characteristics. Walkways should be designed with people of all ages and abilities in mind so that people with mobility aids and families with strollers can utilize them.

Crash Reduction Factor: 65%

TxDOT HSIP Work Codes: 407, 408

Lighting

Integrative Approaches



At night, traffic is normally much lighter, allowing drivers to travel at faster speeds. Providing adequate lighting at intersections, crosswalks, and along roadways can help drivers identify and avoid obstacles in the road. Lighting can be designed with minimal excessive light impacting nearby properties. In addition, lighting can be designed in a way that reduces fixed-object crash severity.

Crash Reduction Factor: 49%

TxDOT HSIP Work Code: 304

Local Road Safety Plans

Integrative Approaches



A local road safety plan (LRSP) provides a structure for identifying, analyzing, and prioritizing roadway safety improvements on local roads. Local road safety plans can be tailored to community needs, but generally involve identifying stakeholders, analyzing crash data, choosing countermeasures, and implementing the solutions. Data driven safety plans help to select strategies that have the highest impact in reducing fatal and severe crashes.

Additional Proven Safety Countermeasures are listed below.

Speed Management



Variable Speed Limits



Speed Cameras

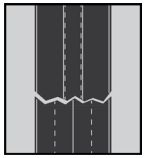
Pedestrian /Cyclist



Bike Lanes

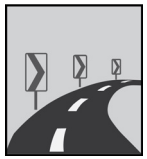


Pedestrian Refuge Islands

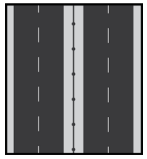


Road Diets

Roadway Departure



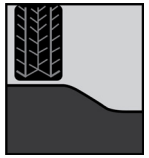
Enhanced Curve Delineation



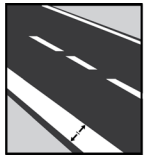
Median Barriers



Roadside Improvements at Curves

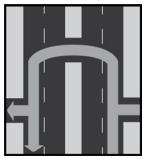


SafetyEdge[SM]



Wider Edge Lines

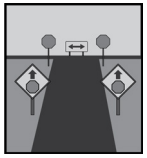
Intersections



Reduced Left Turn Conflict

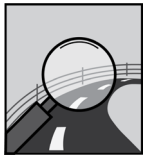


Round-abouts



Multiple Low Cost Measures

Integrative Approaches



Road Safety Audit



Friction Management

Appendix F: Project Prioritization

Table of Contents

Priority Matrix Memo..... 1

Project Prioritization Tool..... 5

Project Prioritization Scoring Criteria

- Safety
    - Critical Crash Locations – Projects that score well in this category are projects that occur at roadway segments with a high number of crashes (numerical categories to be determined based on crash memo) or crashes that include fatalities or serious injuries. Projects that receive a lower score are those located at intersections with a moderate history of crashes (number to be determined according to memo). Projects at locations with minimal crashes will receive no points in this category.

      Example: SH35 @ McHard Right Turn Lanes. This project provided dedicated right turn lanes at a congested intersection separating turning vehicles from the through lanes reducing the potential for rear-end crashes. This project would score a 10.
    - Safety Enhancements – A project received 5 points per performance measure that are satisfied by a project goal or activity in the following categories: Sight Distance, Traffic Calming, Access Management, Traffic Channelization, and Protected Turning Movements. The maximum score is 25 points and would be awarded to a project that met all of these goals.

      Example: Oak Brook Dr @ Dixie Farm Rd – Trafic Signal Updates. The proposed project would improve site distance and add trafic calming to the roadway, so this project would receive 10 points

- Reliability
    - Reduce V/C Ratio – Projects in this category include improvements that reduce the volume-to-capacity ratio of an intersection or roadway segment ranging from 15 points for a reduction of more than 0.25 down to 5 points for a project that reduces the V/C ratio less than 0.15 but more than 0.05.

      Example: McHard @ Pearland Parkway – Adding additional turning lanes to the completed corridor reduce the V/C ratio for the intersection from 1.07 to 0.82, so this project would score 15 points
    - Improve Operation – Projects receive 5 points in this criteria for each performance measure that is satisfied for each of 3 categories: connecting corridors, removing major barriers, and improving traffic signal technology (i.e updated vehicle detection, emergency vehicle preemption, or Flashing Yellow Arrow) for a maximum of 15 points.

      Example: Railroad Crossing @ SH 35 and FM518. This project would remove an at-

grade railroad crossing that that currently impacts trafic on FM518, and turning movements from SH35. This project would score a 5.

- Mobility
    - Bicycle mobility – Projects receive 5 points for this criteria if they include elements that improve bicycle mobility within the City network. This can be adding bike lanes, multi-use paths, or removing gaps within the network.

      Example: John Lizer from Pearland Parkway to Liberty – This project would add bike lanes along a section of roadway, providing a new connection within the City adjacent to a major park. This project would score a 5.
    - Pedestrian mobility – Projects receive 5 points for this criteria if they include elements that improve pedestrian mobility within the City network. This can be adding sidewalks, multi-use paths, removing gaps within the network, or adding sidewalk ramps.

      Example: John Lizer from Pearland Parkway to Liberty – This project would add sidewalks along a section of roadway, providing a new connection within the City adjacent to a major park. This project would score a 5.

- Project Readiness
    - Minimize Jurisdictional Coordination – Projects that score well in this category are those that exist solely within the City of Pearland and do not require coordination with other jurisdictions (i.e. Other Cities, Counties, or TxDOT) streamlining the project approval and construction process.

      Example: Pearland Parkway @ Hughes Rd – This project exists completely within the City's jurisdiction and does not require approval or coordination with outside agencies. This project would score a 5.
    - No Additional ROW – Projects that score well in this category are those projects that can be completed without the need to obtain additional ROW. This category is intended to identify those projects that can be implemented more rapidly.

      Example: Pearland Parkway @ Province Village Dr Signal Phasing – This project can be implemented without obtaining additional ROW. This project would score a 5
    - Coordinated Effort – Projects receive 5 points if they are located along corridors or intersections in which other projects can be completed at the same time. For example, during construction, Public works can repair existing water or sewer lines, or install new utilities, thereby providing savings to the City by reducing work.

Example: Additional coordination will need to occur with the Public Works department to review the future CIP program for locations of proposed projects

- Design and Funding – Projects receive 5 points if they are either already in design or have funding (full or partially) secured as it represents a potential to implement and construct these projects faster than others.

  Example: Additional coordination will need to occur with the Public Works department to determine which projects have preliminary designs or some form of funding.

Project List

	Project	Term	Improvement
1	Broadway @ Miller Ranch	Short	Pedestrian Connection
2	Stone Rd @ McHard	Short	Sidewalk
3	Max Rd @ McHard	Short	Sidewalk
4	Roy @ McHard	Short	Sidewalk
5	Garden @ McHard	Short	Sidewalk
6	O'Day @ McHard	Short	Sidewalk
7	Hatfield @ McHard	Short	Sidewalk
8	Mykawa @ McHard	Short	Sidewalk
9	Pearland Pkwy - Westminister to Shallow Creek	Short	Sidewalk
10	Veterans Dr @ Magnolia	Short	Sidewalk
11	SH 35 @ McHard	Short	Turn Lane
12	SH35 @ Orange	Short	Signal Phase
13	SH35@Main	Short	Railroad Crossing
14	Hastings Cannon @ RR	Short	Railroad Crossing
15	Pearland Pkwy @Hughs Rd	Short	Turn Lane & Phasing
16	Pearland Pkwy @Province Village	Short	Turn Lane & Phasing
17	Pearland Pkwy @FM518	Short	Turn Lane & Phasing
18	Pearland Pkwy @ John Lizer	Short	Turn Lane & Phasing
19	SH35 @ John Lizer	Short	Turn Lane & Phasing
20	Sh35@Oiler	Short	Turn Lane & Phasing
21	SH35@Orange	Medium	Add Capacity and Phase
22	Pearland Pkwy@Hughes	Medium	Add Capacity and Phase
23	FM518@Pearland Pkwy	Medium	Add Capacity and Phase
24	Pearland Pkwy@John Lizer	Medium	Add Capacity and Phase
25	Pearland Pkwy @ Dixie Farm	Medium	Add Capacity
26	SH35 @ Bailey	Medium	Add Capacity and Phase
27	SH35 @ Dixie Farm	Medium	Add Capacity and Phase
28	SH35 @ Hastings Field	Medium	Add Capacity and Phase
29	John Lizer - SH35 to Liberty	Medium	Widen and Sidewalk
30	Veterans Dr	Long	Widen to 4 lanes
31	Dixie Farm Rd	Long	Widen to 6 Lanes
32	McHard Rd - SH288 to SH35	Long	Widen to 6 lanes
33	Broadway (FM518)	Long	Widen to 6 lanes
34	Hughes Ranch Rd - Reid to Hatfield	Long	Roadway Extension

Category	Weight	Points	Criteria	Performance Measure	Score
Safety		15	Critical Crash Locations	Project location includes roadway segments or intersections with fatalities or crashes with serious injuiries	15
				Project Location includes roadway segments or intersections that have a history of non-fatal or serious injury crashes	10
				Project Location includes roadway segments or intersections with minimal to no history of crashes	0
		25	Safety Enhancements	Project Improves Sight Distance	5
				Project adds Traffic Calming Improvements	5
				Project adds Access Management	5
				Project adds Traffic Channelization	5
				Project provides Protective Turning Movements	5
Reliability		15	Reduce V/C	The project reduces future roadway V/C Ratio by greater than 0.25	15
				Project reduces the future roadway V/C by more than 0.15 but less than 0.25	10
				Project improves the roadway greater than 0.05 but less than 0.15	5
		15	Improve Operation	The project connects corridors	5
				The Project removed major barriers	5
				Project improves Traffic Signal Technology(adjusting signal timing, adding emergency vehicle preemption, or incorporating flashing yellow arrow)	5
Mobility		5	Bicycle Mobility	Project Improves Bicycle Mobility	5
		5	Pedestrian Mobility	Project Improves Pedestrian Mobility	5
Project Rediness		5	ROW Concerns	No Additional ROW necessary	5
				ROW needed	0
		5	Jurisdictional Coordination	Project completely within COP	5
		5	Coordinated Effort	Project can be coordinated with other departments for improved efficiency of construction.	5
		5	Design and Funding	Project is in Design or has secured funding (federal, state, or local)	5

Total 100

Sample Project Scoring

Project: John Lizer Road Widening from Pearland Parkway to Liberty Dr.

Project Summary: Project will improve the existing two lane, two way road with roadside drainage to four lane curb and gutter road with sidewalks

Category	Max Points	Criteria	Project Goals	Score
Safety	15	Critical Crash Locations	John Lizer at Pearland Parkway has a some history of crashes	10
	25	Safety Enhancements	Project Chanelizes the roadway by removing roadside ditches and adding	5
			Project provides protected turning movements	5
Reliability	15	Reduce V/C	Project reduces V/C by 0.15 (Assumed)	10
	15	Improve Operation	Project adds additional Capacity	5
			Project adds Traffic Signal Technology	5
Mobility	5	Bicycle Mobility	Project will add bike connectivity to the network	5
	5	Pedestrian Mobility	Project will add pedestrian connectivity to the network	5
Project Rediness	5	ROW Concerns	ROW Needed	0
	5	Jurisdictional Coordination	Project Completely within COP	5
	5	Coordinated Effort	Project Can be coordinated with other Departments	5
	5	Design and Funding	Project is not in design, does not have funding	0

Total Score: 60 /100